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ANNUAL REPORTS
OF THE
Navy Department

FOR THE FISCAL YEAR

1914



WASHINGTON
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1915

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ANNUAL REPORT

OF THE

SECRETARY OF THE NAVY.

NAVY DEPARTMENT,
Washington, December 1, 1914.

To the **PRESIDENT**:

SIR: I have the honor to submit herewith the annual report of this department for the fiscal year ended June 30, 1914, including operations and recommendations and estimates to date.

The Navy was not neglected in the unparalleled record of constructive legislation made by the second session of the Sixty-third Congress. That forward-looking body evinced a true appreciation of the country's real need for a continuously healthy and normal growth of the Navy; and the legislation it enacted approved nearly every recommendation made in the department's report of last December. As a result of the ready spirit and wise discrimination of that Congress, the naval appropriation bill, decreased below last year's figures, provided for two dreadnaughts instead of one, and, later in the session, seizing upon a rare opportunity, Congress authorized the sale of two old ships, ill-adapted to the present needs of our Navy, and the construction in their stead of a powerful dreadnaught.

The second session of the Sixty-third Congress has, therefore, to its credit the authorization of three new dreadnaughts. In addition to these new dreadnaughts, there were authorized six torpedo-boat destroyers and eight or more submarines, one of which is to be a sea-going vessel, the first of its kind. The estimates for the short session call for an increase embracing dreadnaughts, destroyers, and submarines, and likewise for other craft needed. These estimates have been prepared with consideration for the needs of the service and the necessity for economy which the rigors of foreign war have imposed upon our national budget. These recommendations granted, the increase will be noteworthy and will give us a well-rounded Navy equal, if not superior, to that of any Navy in the world, ship for ship and man for man.

The past year in the Navy affords gratification to all who take pride in its growth, strength, and usefulness. In every line of

progress and achievement it has demonstrated its steady advance and efficiency. For the first time in many years the enlistment is up to the limit prescribed by Congress. The present enlistment is 52,667, or 4,612 greater than in 1913, and so attractive has the service become to the youth of the land that it has been possible to have a waiting list, and it is a fact that picked men alone, of exceptional qualities, mental and moral, and of fine physical type, are now admitted; for out of 88,943 applicants for enlistment 13,780 new men were accepted. Not only is the Navy up to its prescribed quota as to numbers, but the popularity of the service renders unnecessary strained or unusual methods to attract a sufficient number of young men. The welfare of these young men who are so freely offering themselves for their country's service has been by no means neglected. As will appear hereafter, their pathway to the Naval Academy, the Line, and the Pay Corps has been facilitated, and their physical comfort has been materially improved. Their avenues of promotion are not as numerous as they should be, or as they will be. It must be true in the American Navy that every sailor carries an admiral's flag in his ditty box, as Napoleon said it was true of the army of France, that "every soldier carries a marshal's baton in his knapsack." The conviction is strong and growing stronger in the Navy that the best discipline is promoted by friendly relations and mutual understanding between officers and men. This is but a world-wide truth and was recently voiced by President Poincaré of France, when he said: "There is being established between the commanding officers and the men a confidential intimacy which, far from undermining discipline, ennobles it further by an enlightened consciousness of solidarity in devotion and sacrifice."

From the highest rank to the newest recruit there has been manifested a spirit of comradeship and cooperation and ambition. These essential qualities are seen and felt in every line of effort—whether under fire at Vera Cruz; at target practice where the steady hand and the quick brain are indispensable; in aeronautics, which have realized the dream of Tennyson—

Saw the heavens fill with commerce, argosies of magic sails,
Pilots of the purple twilight, dropping down the costly bales;
Heard the heavens fill with shouting, and there rain'd a ghastly dew,
From the nations' airy navies grappling in the central blue;

in the submarines, where Jules Verne's vision of "Twenty Thousand Leagues Under the Sea" has been translated from the realm of fiction to the realm of fact, and become a record of everyday work of the Navy in action; in the schoolroom or the workshop; walking the deck or manning the gun, or conquering the currents of the air by wireless. In a word, in every activity of our many-sided service,

officers and men have risen in splendid performance of duty to add new glory and new luster to our Navy, which, from the days of Paul Jones and Barry to those who fought at Vera Cruz, has won glory, more by restrained self-mastery than by aggressive display of courage.

It is thus seen that in increase of personnel and in material 1914 has strengthened the force and the power of the Navy. With the authorization by the Congress, shortly to convene, of a program as progressive as at the session which closed in October, the Navy will be stronger, relatively and actually, than at any period of our history.

ESTIMATES SHOW REDUCTIONS.

The appropriations for the fiscal year 1914-15 for the Naval Establishment amounted to \$140,233,716.61, exclusive of the \$4,635,000 appropriated from the proceeds of the sale of the battleships *Idaho* and *Mississippi* for the battleship authorized in their stead. Estimates submitted for the Naval Establishment for the fiscal year 1915-16, exclusive of the amount required to continue work on the vessel authorized to replace the *Idaho* and *Mississippi* (\$5,827,410), amount to \$139,569,409.88, or \$664,306.73 less than the 1915 appropriations, and this reduction has been made notwithstanding advances recommended in the appropriations "Pay of the Navy" and "Pay of the Marine Corps" of \$1,359,839 and \$149,284.47, respectively, to meet the normal increases already authorized by law in these two arms of the service.

The policy has been, as it was a year ago, to save ashore for expenditure afloat; to maintain shore stations for the fleet, and not the fleet for shore stations. The biggest reduction made was for "Public Works," for which the aggregate of the estimates of the several yards and stations was \$10,381,869. These estimates were reduced to \$2,777,816, or \$697,684 less than the appropriations for 1915. In the big working appropriations "Construction and Repair" and "Steam Machinery" it was felt that the apparent balances under them for 1914 justified reductions aggregating \$700,000. A reduction of \$241,657 in the estimate for the Bureau of Navigation is due largely to reenlistments and large savings by wise action in transportation expenses, in the face of an increase of 4,600 men. Cognizance was also taken of the authority in the naval appropriation act for 1915 allowing actual credits to be made to the appropriations concerned for stores, equipage, and supplies turned in from ships and ships' equipage turned in from yards and stations, and the estimates for various appropriations were reduced by the estimated amount of these actual credits during 1916—in round numbers, \$249,000. Briefly stated, excluding "Pay of the Navy," "Pay of

the Marine Corps," and "Public Works," the estimates submitted for appropriations for the maintenance of the Naval Establishment in 1916 are \$2,222,403.20 less than the appropriations for 1915.

DID NOT SPEND ALL APPROPRIATED.

In the economical administration of the department no dollar has been expended because it was appropriated, but there has been a zealous effort to bring the expenses of the department below the estimates, and to conduct it upon less than the sums appropriated. The success of such efforts is seen in the fact that of the money appropriated the following unexpended balances in excess of \$100,000 (smaller balances are not given) are shown for the fiscal year ended June 30, 1914:

Transportation, Navigation.....	\$178, 643. 56
Construction and Repair.....	1, 030, 123. 81
Equipment of vessels (Construction and Repair).....	433, 296. 46
Steam machinery.....	446, 347. 27
Equipment of vessels (Steam Engineering).....	230, 699. 60
Equipment of vessels (Supplies and Accounts).....	110, 429. 08
Total	2, 427, 539. 78

THE BUILDING PROGRAM.

The building program recommended this year differs little from the recommendations in last year's annual report. It is a "well-balanced program." The construction of the following is included in the estimates:

Two dreadnaughts,
Six destroyers,
Eight submarines or more, one to be of sea going and seven
or more of coast-defense type,
One gunboat,
One oiler.

The estimates were made prior to the 15th of October, as required by law. They follow the policy recommended by the general board but reduce the number of ships. Recent developments in naval warfare have strengthened faith in the efficacy of the submarine. The department urges, therefore, the construction of an increased number of submarines and the larger utilization of this weapon of warfare which has demonstrated its effectiveness. There are many (very many more than a few weeks ago) who believe the time has come when the advice of Sir Percy Scott should be taken. Months ago that able English officer declared that the submarine was the most effective ship of the navy of the future and advised a cessation in the rapid construction of dreadnaughts and the utilization of the money thus

spent in building large numbers of submarines. The lay mind has accepted this view of the policy, but the trained naval officers making up the general board are convinced that, while the submarines have a large part to play in naval warfare, they do not replace the larger craft, and the board makes recommendation to the department for an increase in the Navy, embracing four dreadnaughts and the usual complement of destroyers, submarines, and auxiliaries. These naval statesmen hold to the opinion that the dreadnaught remains the central and chief fighting force of a well-proportioned navy.

The General Board reiterates the opinion it has always held that "command of the sea can only be gained and held by vessels that can take and keep the sea in all times and in all weathers and overcome the strongest enemies that can be brought against them." It declares "other types are valuable and have their particular uses," but "the backbone of any navy that can command the sea consists of the strongest seagoing, sea-keeping ships of its day, or, of its battle-ships." The opinion of the General Board as given in its annual report (Appendix A, p. 53), based upon study, investigation, and observation, is entitled to great weight. The department feels that it is upon safe ground in looking to the Board to prescribe the character of the ships to be constructed. The large increase in submarines is most desirable, but nothing in the present war has disproved their faith in the modern dreadnaught. The fact that there has been no encounter between these powerful ships does not justify the conclusion that their further construction should be discarded in favor of the smaller craft which has astonished the world by its ability to sink cruisers and other craft, giving its severest and most fatal blows before its presence is discovered. It may be that naval engagements later on will teach lessons that will change expert opinion, but as long as the bulk of the ablest naval officers believe the increase of the Navy should embrace, in fair proportion, the dreadnaught, the destroyer, and the submarine, the Secretary would not feel warranted in recommending a widely different program of construction. However, in view of the demonstrated power of the submarine, I would impress upon Congress the importance of making a larger increase in the submarine craft, appropriating generously therefor without reducing the appropriations for other craft. The estimates for these were reduced to the minimum. That our Navy has not neglected the construction of submarines will be seen by a comparison of our strength in this craft with that of foreign navies. It is roughly estimated that there are built or building for the various navies the following number of submarines: England, 84; France, 76; United States, 51; Germany, 31; Japan, 17. This estimate was made in July of this year.

When the relative sizes of the fleets of the great nations enumerated above are considered, it will be seen that the United States has a submarine flotilla relatively and actually very powerful. England's fleet is more than twice as great as ours, yet she has but little more than half as many more submarines. France has a considerably larger submarine fleet than ours, with a smaller navy, but she has in the past taken the lead in submarine building. Some years ago she abandoned the dreadnaught policy to acquire large numbers of submarines, but in the last two or three years has made unusual exertions to repair her deficiency in dreadnaughts. England has overcome this lead, and we are on that road, having in addition to the 51 ships already mentioned 8 or more authorized by last year's bill, on which work will shortly commence, and we are asking for 8 or more this year, which will swell our total to at least 67 in the next three years. Germany, with a larger fleet than ours, has less submarines, and Japan, with a fleet smaller than ours in strength, only half as many submarines. What we have done, however, in submarine construction is but an earnest of what must be done in the future. When we shall have a division of seagoing submarines in commission, we will have added to the battleship fleet a strong fighting unit which must be of large importance in any over-sea operations.

As far as the submarines themselves are concerned, it is believed that ours are on a par with any in the world. The development of our types has been logical, and in each new type the ideas and comments of the officers and men who operate the submarines in service have been considered. In the appropriation made by the last Congress two types for the first time were included—one of high surface speed, to accompany the fleet, and one for coast and harbor defense. In the building of two such distinct types we are in accord with what foreign countries are doing, and submarine flotillas in the future will probably be composed of vessels of these two types.

Recommendation is made for the construction of an additional oil ship and a gunboat, both of which are urgently needed. A transport and a supply ship are building, and the demand is chiefly for ships that have the highest military value. Auxiliaries can in need be purchased, but it is a matter of years to construct fighting ships. Economy should be practiced, therefore, at this time in auxiliary craft.

INCREASE IN EFFECTIVE FORCE.

Since June 30, 1913, the effective force of the Navy has been increased by the completion of vessels building under contract and at navy yards, as follows:

Battleships *Texas* and *New York*; torpedo-boat destroyers *Cassin*, *Duncan*, *Cummings*, *Aylwin*, *Benham*, *Parker*, *Balch*, and *McDougal*;

submarine torpedo boats *H-1*, *H-2*, *H-3*, *K-1*, *K-2*, *K-3*, *K-4*, *K-5*, *K-6*, and *G-4*; fuel ships *Proteus* and *Nereus*; gunboats *Monocacy*, *Palos*, and *Sacramento*.

The battleships *Texas* and *New York* are the first vessels of the United States Navy to be armed with 14-inch guns. With speeds in excess of 21 knots and with heavy armament and armor, they form a very effective addition to the first fighting fleet.

The three battleships already referred to as authorized by the preceding session of Congress will carry as heavy armor and as powerful armament as any vessel of their class; they will be 600 tons larger than the *Pennsylvania* and *Arizona*; they will carry a secondary battery so arranged as to be available for defense against torpedo-boat destroyers irrespective of any condition of weather. To them the names *California*, *Idaho*, and *Mississippi* have been assigned, and they will be known as the *California* class. Following the policies inaugurated in the past year, the fullest possible provision will be made to secure the maximum comforts for the crew. A crew's reception room, wherein members of the crew can receive the members of their families and other guests, will be provided, and, similar to the provisions now existing for officers, laundries will be installed for the use of the crew.

Anticipating congressional provision of battleships, the design bureaus of the department proceeded with their design work, and on August 1, 32 days after the naval appropriation bill became a law, issued plans and specifications for these vessels. Never before in the history of the new Navy have battleship plans been issued in such brief time following enactment of the naval appropriation act. As a result of competition, the contract for the *Idaho* was awarded to the New York Shipbuilding Co. under the department's plan of turbine propelling machinery and boilers, for \$7,250,000. The contract for the *Mississippi* was awarded to the Newport News Shipbuilding & Dry Dock Co. under said company's design of Curtis turbines, for \$7,115,000. The construction of the battleship *California* will be assigned to the navy yard, New York.

It will therefore be noted that these vessels, although of 600 tons greater displacement than the *Pennsylvania*, will be obtained in the case of the *Idaho* for \$10,000 less money than the smaller ship and in the case of the *Mississippi* for \$145,000 less money. The contract price for the *Pennsylvania* was \$231.21 per ton of displacement. Had the contracts for the *Idaho* and *Mississippi* been placed at the same cost per ton of displacement as the *Pennsylvania*, the cost of these two vessels would have been \$432,440 more than the contracts actually made.

THE NAVY OF THE AIR.

When the fleet was ordered to Mexican waters in April, in connection with the occupation of Vera Cruz, two aeroplane sections of two aeroplanes each, completely manned and with full outfits, were sent on board the *Mississippi* and *Birmingham* to Vera Cruz and Tampico, respectively. There was no occasion for the use of aeroplanes at Tampico. Those at Vera Cruz were used continually, and although the Navy's aeroplanes are not fitted for land work, for 43 days they did a good deal of scouting over the trenches protecting Vera Cruz. There were daily flights without regard to weather or other conditions. To every call made upon them our young aeronauts made ready and cheerful response, and their forethought and caution prevented any accidents. Their scout work in the sky assured the Commander-in-Chief that no mines had been planted, enabled him to locate sunken works, and was of inestimable value in the combined operations of the Army and Navy. The heavy toll that must be paid for progress in all invention calling for daring has resulted in the death this year of one air pilot, Lieut. J. D. Murray, United States Navy. His name will be remembered among the immortals who have given their lives to the development of aeronautics. He was an efficient officer, courageous in life, mourned in death.

Air craft have demonstrated in the present war in Europe that no military arm is complete which lacks them. They will not replace vessels of war, but will extend the field of operations to the air as well as on the surface of and underneath the water. The recent wars have demonstrated the inestimable importance of scouting, and the day is not far distant when a modern Maury will chart the currents of the air as that great naval officer charted the currents of the ocean. Air craft on the land prevent surprises of the character which have determined most military victories. They provide the best means for discovering submarine mines, and have now become an indispensable naval adjunct. We are but in the infancy of air craft. The development in the manufacture of these craft in this country needs to be stimulated, and the success of this arm of the military service abroad will be a mighty stimulus to American manufacturers.

Early in the year a board of experienced officers was appointed by the Secretary to consider and make recommendations for the development of aeronautics in the Navy. After a thorough investigation this board recommended the establishment of an aeronautic station at Pensacola, Fla., the organization there of a flying school for officers and men in the art of aerial navigation and the purchase of certain types of aeroplanes and other flying craft. Orders were given, early in the year, for some foreign-built aeroplanes, in addi-

tion to larger orders for aeroplanes made in this country. The purpose of ordering abroad was to enable the aeronautic school to test out the best foreign designs in construction and equipment, to the end that the Navy might adopt those which had demonstrated themselves by actual trial to be best fitted for the service. Unfortunately, the war made it impossible for the orders placed abroad to be filled, and the trial of such craft must be postponed. The best types of American manufacture have been ordered, and the department will develop this modern branch of the naval service steadily and rapidly. Indeed, it has been more ready to develop it during the past year than the manufacturers of this country have been to supply the demand for craft of approved design. It is recognized that we are but on the threshold of the development and utilization of air craft, and their steady increase on a large scale is a fixed policy of the department.

A volunteer militia, if it may be so called, has been organized by the owners of air craft, and has been patriotically placed at the command of the Navy Department if times of peril should call for its assistance to the regular airship flotillas.

THE LAW AND THE PROFITS.

The naval act of 1914 provides that no part of the money appropriated shall be used "to procure through purchase or contract any vessels, armament, articles, or materials which the navy yards, gun factories, or other industrial plants operated by the Navy Department are equipped to supply, unless such Government plants are operated approximately at their full capacity for not less than one regular shift each working day." Three exceptions are made—the first, "except when contract costs are less than costs in Government plants"; second, "except when Government plants are unable to complete the work within the time required"; and, third, "except in cases of emergency."

This injunction of the law that nothing should be bought in the markets which could be made by the Navy itself has been observed with a conscientious scruple in letter and in spirit, which has resulted, often, not only in large savings, but in widening the Navy's avenues of manufacture. The law has yielded profits. Contrary to popular idea the Navy Department in what it manufactures does so, from a superdreadnaught to a gallon of paint or a pound of powder, cheaper than the same can be purchased. This is particularly true of the most expensive instruments of war, but is equally true of gasoline engines, electrical supplies, engines for dreadnaughts, shrapnel, clothing for marines and sailors, accouterments, and a multitude of other articles required for the fleet and shore stations.

The last Congress made an appropriation, upon the recommendation of the department, for the enlargement of the powder factory. Before the Government began to manufacture smokeless powder it paid 80 cents a pound for it. Government competition, coupled with better methods (but chiefly the fact that the Government demonstrated the exact cost of producing it), have brought down the price at which the department purchases this powder to 53 cents. The department is now manufacturing it at Indian Head at a cost of 36 cents a pound, and when the enlarged plant is completed may be able to still further reduce the cost of production. If the department had bought what it manufactured last year the powder bill would have been \$397,536.16 more than it was. In addition to effecting this saving by manufacture, the department reworked 1,013,940 pounds, at 11.9 cents per pound, and this method insures the use of much powder every year that would otherwise be useless.

Upon the recommendation of the department Congress made an appropriation for enlarging the torpedo works at Newport, R. I. In the two years that the present torpedo works have been in full operation the cost of manufacture of each torpedo has been reduced from \$4,200 to \$3,200. These torpedoes, if bought at the only private torpedo plant in the country, would cost \$5,000. The enlargement of the torpedo works will not necessarily cause the Navy Department to manufacture all its torpedoes, but ability to make a large proportion of the number needed will result in securing better prices from manufacturers. This is true of all other munitions of war. Ability to make them secures reduction in cost. This experience has justified the recommendation of the department and the act of Congress.

·NO PRIVATE GAIN IN WAR PREPARATION.

It is not the policy of the department to extend manufacturing by the Navy to all that it needs, but to continue buying the bulk of its supplies from private manufacturers and business men. It should be able, however, to demand competitive bids by having potential facilities to manufacture anything needed for armament or equipment which may at any time be controlled by those who demand excessive prices. There is another reason why the Navy Department should be able to manufacture munitions of war—that policy would prevent effective agitation or organization for big preparations for war conducted by those who make profit by the manufacture of war supplies. It has been suspected in some countries that makers of armor and powder, guns and fighting craft have promoted steadily increasing equipment for giant navies and large armies for their personal enrichment, as others have practiced “philanthropy and 5 per cent.” The incentive of personal aggrandizement by prepara-

tions for war should not be permitted to exist in the United States. The effective way to prevent so baneful an influence is for Congress to give the department authority to manufacture implements of war, an authority which could be employed when necessary.

IMPROVED ACCOUNTING METHODS.

The cost of industrial work done at navy yards has received special attention during the past few months, not only for the purpose of being able to render to Congress accurate annual statements, but also to the end that true out-of-pocket Government costs may be ascertainable for comparison with offers from outside establishments, with resulting stimulation of competition and reasonable control over prices. A board of officers, selected with care from all branches of the service, went very thoroughly into this question last spring, and although the time at their disposal was quite limited they progressed far enough to submit a report and recommendation on the strength of which a departmental order was promulgated reducing by 28 per cent all overhead or indirect charges during the current fiscal year. This reduction was based on the fluctuation of total expenditures as compared with fluctuation in the volume of navy-yard work. The subject of separating and properly classifying these charges is now being exhaustively studied by a board of experts working in cooperation with the Director of Navy Yards, and it is confidently expected that their investigations will lead to results so conclusive and at the same time so practicable to adopt that the much discussed problem of cost keeping in the Navy will have been satisfactorily solved.

INDUSTRIAL MANAGERS FOR NAVY YARDS.

Every Secretary of the Navy has been confronted with the problem of securing the most efficient management of the navy yards. Inasmuch as it is both a military and industrial problem, there have been widely differing opinions as to the methods of securing the best results in the industrial department and at the same time preserving the necessary military authority. The House Committee on Naval Affairs visited most of the yards last year, and during the hearings of the Secretary of the Navy the question of economic management was fully discussed. The committee was promised recommendations on navy-yard management in the Secretary's report at the third session of Congress. As a result of long consideration, it has been decided not to formulate any hard and fast plan; but, in pursuance of the act of Congress permitting the Secretary to designate engineer and construction officers, as well as line officers, to navy yard management, a plan has been put in operation at the New York yard,

which is the largest construction as well as repair yard in the Navy, by which an admiral is to be commandant, in charge of all military matters, and an engineer officer is to be the industrial manager of the yard. At the Charleston Navy Yard an engineer officer has been named as commandant. Within a short time construction or engineer officers will be utilized at such other yards as may promise the best results. It is believed the introduction of industrial management will justify the wisdom of the experiment.

INCENTIVE TO INVENTION.

The department approves the recommendation of the Bureau of Ordnance that some plan be devised by which a cash reward may be given to any civil employee who may work out an improvement or economy in any manufacturing process or who may submit a design for some important improvement in ordnance material or plant machinery, or any improvement of naval equipment. This scheme should follow generally that authorized by act of Congress in 1912 for the Ordnance Department of the War Department. In many private manufacturing establishments some such scheme is in vogue.

ELECTRIC PROPULSION.

The navy-yard-built collier *Jupiter* is unique in being the first vessel of any size in any navy equipped with electric propulsion. Although a few small boats had heretofore been equipped with this kind of machinery, the installation in the *Jupiter* is the first one made in any naval vessel, and the first one of any considerable power in any vessel whatever.

As a test of the durability of her machinery, the department recently ordered her from San Francisco to Puget Sound, and from Puget Sound to Philadelphia through the canal. She completed the trip without incident, being the first naval vessel to make the trip from the west coast to the east coast by the canal, very forcibly indicating the value of the Panama Canal in the naval defense of the country. She completed the trip in 23 days from San Francisco to Philadelphia, whereas the *Oregon*, rushing from the west coast to the east coast via the Straits of Magellan, required 66 days from San Francisco to Jupiter Inlet. Her trip afforded a remarkable demonstration of the efficiency of the electric drive, and indicates clearly that electric propulsion must be considered hereafter in selecting the form of drive of naval vessels.

In the majority of our ships propulsion had previously been accomplished by means of reciprocating steam engines directly connected to the propeller shaft, but as the size of ships and their speed increased conditions arose which made it desirable to use turbines instead of

reciprocating engines. The turbines also were directly connected to the propeller shafts, but in some cases the conditions to be met necessitated the use of propellers that were not as efficient as could be desired, and in all cases the turbine ships were far less efficient in backing than those that had reciprocating engines. The electric drive seemed to offer advantages over either of the former systems sufficient to justify its trial on a scale large enough to demonstrate its suitability for ships of high power and great speed. The *Jupiter* installation is the result of this decision. It differs from the turbine installation in the fact that while a turbine is used to develop power it operates an electric generator instead of a screw propeller, and the electric power thus generated is transmitted to motors on the propeller shafts in much the same manner as electric power is transmitted on shore. In other words, there is a central power plant composed of boilers, turbines, and electric generators, and the power is taken from this plant to the motors on the shafts. This installation possesses an advantage over the all-turbine drive in that it is not necessary to install a backing turbine, the reversing being accomplished through the motors, and with the same ease and certainty as prevail in any other electric-motor installation, and with the further advantage over the all-turbine installation that full power can be utilized in backing.

The success that has thus attended the introduction of this new type of machinery is such that it was considered advisable to extend its use, and I have accordingly authorized its installation in the battleship *California*, which is to be built at the New York Navy Yard.

The test of the mechanical reduction gear which is being installed in the collier *Neptune* is expected to furnish valuable data for comparison with the electrical equipment of the *Jupiter*. The vessels are practically identical in construction except for the propelling machinery, and upon completion of the tests which the department has in contemplation it will be possible to determine the relative merits of the two systems.

THE PASSING OF COAL AND THE ADVENT OF OIL.

Each year marks more distinctly the passing of coal, with its attendant discomfort and engineering and military inferiority as fuel for ships of war. Henceforth, all the fighting ships which are added to the fleet will use oil, and the transition from coal to oil will mark an era in our naval development almost comparable with the change from black powder to smokeless powder for our guns. The ease with which oil can be handled, its superior steam-producing properties, the reduced number of men required for handling it, and the decreased exertion required from the firemen, to say nothing

of the ease with which the cleanliness of the ship can be maintained, all combine to make oil the ideal fuel for naval use. The operation of "coaling ship" has always been a dirty one, not only for the officers and men, but for the ship as well. No officer is so high in rank, and no nook so sacred, as to be immune from the discomforts that accompany coaling. The time consumed in cleaning ship afterwards is practically so much time lost from important military duties and is attended with no little personal discomfort; but with the new order of things a transformation will take place. "Oiling ship" will be an operation that will cause no more personal or material inconvenience than the bringing of an oil-laden lighter alongside, and the "field day" which always followed coaling, when every man became a scrubber, and every deck was seething with soap and water, will become a matter of history. The ship's routine will be carried out while oiling, and the only people who will know that fuel is being taken on board will be the few who are directly concerned in seeing that it is properly stowed.

SUPPLY OF FUEL OIL.

In my annual report of last year I recommended the passage of legislation that will enable the Navy Department to produce and refine its own oil drawn from its own oil lands in order to relieve itself of the necessity of purchasing what seems fair to become the principal fuel of the Navy in the future at exorbitant prices from private companies that may completely control the supply. During the year, in compliance with a Senate resolution, representatives of the Navy Department and the Interior Department, aided by the counsel of the Bureau of Mines, have been investigating the feasibility, desirability, and expense of the Government constructing an oil pipe line from the midcontinent field of Oklahoma to some point on the Gulf and acquiring oil lands and producing, transporting, and refining oil for the purpose of providing at all times an adequate, dependable, and economical supply of fuel for the Navy. This work will be made the subject of a report to the Senate.

The Navy Department has been unable to take any steps looking to the development of the naval petroleum reserve in California, due to the lack of funds, absence of specific authorization by Congress, and the unsettled question as to the validity of the withdrawal orders of 1909 and of the titles of operators on lands within the confines of these reserves. In order to clear up the conflicting claims to petroleum lands included in orders of withdrawal the following bills were introduced in the Senate and House of Representatives: S. 5434, S. 5673, S. 4898, H. R. 15661, H. R. 15469, and H. R. 16136.

None of these bills as originally introduced properly recognized the Navy's rights to lands within the naval petroleum reserves or provided means by which the Navy might secure oil from these reserves or be reimbursed for the oil drawn from lands specifically set aside for the "exclusive use and benefit of the Navy" by the President in compliance with an act of Congress. At first I was opposed to the passage of any of these measures because the Navy desires a proven oil-bearing area that may be set aside and reserved with the oil remaining underground in natural reservoirs, protected from loss by fire and evaporation, and stored without cost until the reduced production and increasing price of oil rendered it advisable to produce oil for the Navy from this area. After consideration of all the interests concerned the Public Lands Committee of the House of Representatives thought operators on unpatented land were entitled to relief, and H. R. 15469 (S. 5673), which carried this relief, as enacted into law contained the following amendment: "*Provided further*, That any money which may accrue to the United States under the provisions of this act from lands within the naval petroleum reserves shall be set aside for the needs of the Navy and deposited in the Treasury to the credit of a fund to be known as the Navy petroleum fund, which fund shall be applied to the needs of the Navy as Congress may from time to time direct by appropriation or otherwise." The general leasing bill (H. R. 16136), as passed by the House of Representatives, carried the following provision: "*Provided*, That any moneys which may accrue to the United States under the provisions of this act from lands within the naval petroleum reserve shall be deposited in the Treasury as miscellaneous receipts." This bill did not pass the Senate, but if it were enacted in its present form it would take from the Navy any rights it has in the Navy petroleum reserves, and I feel that I would fail to do my whole duty if I did not urge the necessity of retaining the naval petroleum reserves as such and augmenting them by other areas in other fields in order to obviate the necessity of increased appropriations in the future to purchase what now belongs to the Government.

I am still of the opinion that the Navy should own its oil lands and ultimately produce, transport, refine, and store its own oil in order that the department may at all times be assured of an adequate and dependable supply of fuel oil at reasonable cost, so that in the design of ships full advantage may be taken of the great superiority of oil as a fuel without fear of the privately controlled price and supply of oil forcing the Government to enormous increase in cost of operation of the fleet or reduced activity of the fleet in time of greatest need to the Nation.

PEARL HARBOR NAVAL STATION AND DRY DOCK.

Years ago, perceiving the military value of a naval station at Hawaii, Congress made liberal appropriations for a large naval station at Pearl Harbor and the construction of a modern dry dock to take the large warships, and large commercial vessels as well. The buildings upon comprehensive plans, with workshops, hospitals, marine barracks, and all the accessories for a well-equipped naval station at that strategic point are nearing completion, but a series of misfortunes, necessitating changes and adjustments, has prevented the construction of the dry dock which was authorized on May 13, 1908. That act authorized the construction of "one graving dry dock capable of receiving the largest war vessels of the Navy, at a cost of not exceeding two million dollars." A contract was awarded to the San Francisco Bridge Co. to construct a dry dock 589 feet long. A change to 800 feet, the limit of cost being increased to \$2,700,000, and a subsequent change to 1,008 feet, with a limit of cost still further increased to \$3,486,500, were made and the work continued until February, 1913, when a serious accident completely destroyed most of the work that had been done. In the 1913 report the following statement was made of the "naval tragedy of the year": "This disaster swept away a naval project and introduced a problem of immeasurable difficulty." At that time the enormity even of this "immeasurable difficulty" was not fully realized. It has been the overshadowing and brain-racking problem of the year, absorbing more time in its imperative investigations and considerations than any other matter to be settled by the department. A civil engineer of international reputation was engaged to visit Pearl Harbor and make report; the Chief of the Bureau of Yards and Docks and the civil engineer in charge of the work at the time of the disaster, together with half a dozen of the expert engineers in the service, have devoted a major portion of the year to the effort to devise a plan and secure an agreement with the contractors by which the dry dock would be safely completed. Recognizing the universally admitted importance of the gigantic project, and the difficulty of the construction, or reconstruction, with its call for engineering genius of the highest order, Congress granted an authorization of an additional million and a half dollars for its completion; and yet the differences between the department and the contractor seemed so apparently irreconcilable that at times resumption of work upon plans and terms that were wise and satisfactory was almost despaired of. It is gratifying, therefore, to report that an agreement has been reached with the contractors by which it is expected the work of construction will be carried to completion upon a plan approved by the ablest engineers. It is earnestly hoped that

the end has come of the series of troubles and disasters which have too long delayed this great enterprise, and that within a reasonable time it will be completed.

ARMOR-PLATE PLANT NEEDED.

The annual report for 1913 contained an earnest recommendation for the erection of an armor-plate factory. Twice the Government has authorized the construction of a factory, but twice were the armor-plate factories saved a monopoly of this business through "a mysterious Providence." There are only three concerns in the country which make armor plate, and last year, when bids were invited, all three made identically the same bids, to a cent. They justified this sham of bidding by saying that the department had fixed the price and divided the business between the three concerns regardless of the bidding, making the award of one-third of the quantity desired to each firm at the lowest figures quoted, which was always, as may be supposed, a figure which gave inordinate profits. In 1913, when the first bids had all been rejected and the manufacturers had learned that the department would not pay the price demanded, a bid was made and accepted by which a saving of \$111,875 was made for the *Arizona's* armor over the price charged for that of the *Pennsylvania*, bought in 1912. This saving, effected only after strenuous efforts to secure real competition, was very small in comparison with the saving effected in other big contracts where the three big steel concerns had real competition. Last year, on the same ship on which the department secured a reduction of only \$120,746 on armor-plate contracts of \$3,490,088, it saved \$378,261 on a contract for \$730,456 worth of special treatment steel protective deck plating. Why? Because there was competition for this special treatment steel, and the award was made to a company other than either of the three which have a monopoly of making armor plate. When the second session of the Sixty-third Congress authorized the construction of three dreadnaughts, calling for 24,384 tons of armor plate, the department confidently expected to secure bids at least based on a wholesale purchase. But, when the bids were opened, "what a dainty dish" was served up in place of competitive bidding! The three companies, instead of giving a lower price when there was offered a contract for the armor plate for three ships instead of only one, submitted bids only a trifle less than the price they had received for the armor for the *Arizona* last year. These bids were promptly rejected. Finally, upon a second opening of bids, the department accepted bids which effected a saving of \$738,648.

But, though this saving had been effected, it became even plainer than last year that the Government is at the mercy of the three

manufacturers of armor plate whose policy is to make the Government pay prices much beyond a fair profit. The three companies make affidavits that they are in no combination and have no agreement affecting prices, as they are required by law to do. This does not, however, prevent their availing themselves of a mental telepathy which works against the Government and denies real competition in the bidding.

Congress at its second session did not act upon the recommendation to authorize the erection of an armor-plate factory. Some Members did not see their way clear to vote the large sum necessary for the erection of a plant. Others did not desire to make the departure without the fullest investigation and inquiry. But Congress did in the naval bill provide for securing information. It authorized the appointment of a committee to consist of the chairman of the Committee on Naval Affairs of the Senate and the chairman of the Committee on Naval Affairs of the House of Representatives and one naval officer to be selected by the Secretary of the Navy to investigate and report at the next regular session of Congress upon the cost of erection of an armor plant to enable the United States to manufacture its own armor plate and special-treatment steel, capable of standing all ballistic and other necessary tests required for use in vessels of the Navy, at the lowest possible cost to the Government, taking into consideration all the elements necessary for the economical and successful operation of such a plant. It provided that the report should contain the estimated cost of a plant and site sufficient to accommodate a plant having an annual output capacity of 20,000 tons, and also a plant having an output of 10,000 tons, and also an itemized statement of the estimated cost of the necessary buildings, machinery, and accessories for each, and the estimated annual cost and maintenance of each, and the estimated cost of the finished product. The committee was authorized to sit during the recess of Congress, to send for persons and papers, and to administer oaths.

In pursuance of that provision the commission of inquiry, composed of Senator B. R. Tillman, chairman of the Senate Naval Affairs Committee, Representative L. P. Padgett, chairman of the House Naval Affairs Committee, and Rear Admiral Joseph Strauss, United States Navy, Chief of the Bureau of Ordnance, are at work to obtain the information called for in the naval bill, but as Congress did not adjourn until late in October the committee has not had time for full investigation and for hearings. It is to be regretted that this committee can not now, because of the war in Europe, make an examination into the production of armor plate abroad. That information would be of the highest importance, giving all the facts so

comparison could be made between what armor plate should cost and the investment in plants in other countries as well as our own.

NAVAL RADIO.

The President recently signally honored the Navy by intrusting to this department the enforcement of the Executive order of August 5, which was necessary to prevent radio stations under the jurisdiction of the United States becoming the instrument through which unneutral messages were sent to vessels at sea or to other radio stations. At the outbreak of the European war it developed that no precedent existed which related to the use of radio stations by persons within the limits of neutral countries during continuance of hostilities. The President, in pursuance of his neutrality proclamations, intrusted to the Navy Department the duty of acting as censor of radio communications. This work has been done without friction or injury to commercial business. It became necessary for the Government to take over the radio station at Tuckerton, N. J. Its ownership was in dispute, it had no license to operate under the radio act, and its control by the Government was required to meet a real demand for its use for neutral messages.

The primary purpose of the naval radio establishment is a purely military one, and this has been emphasized by events in connection with our occupation of Vera Cruz and still more forcibly during the progress of the war in Europe; and while this feature of our equipment is one in which the naval service alone is directly interested, it is a matter of scant knowledge how great a part the naval radio establishment plays in everyday commercial life. An idea of this may be had from the statement that we have opened 25 stations to commercial business, and that every ship of the Navy is herself a commercial station, as all private messages handled are paid for by the senders. During the war in Mexico, when all land wire and cable communication between the United States and the southern part of Mexico was interrupted, the naval vessels on the west coast afforded the only means of quick commercial communication and soon began to handle a large business.

In addition to the paid commercial business carried on by the naval radio stations the system renders a free service of inestimable value in the daily transmission from Arlington and other stations of the time signals from the Naval Observatory, thus enabling ships at sea, even though far beyond the range of transmission of their own equipment, to determine their exact chronometer correction. Even sailing vessels which habitually make long voyages and which have no power with which to operate a radio station of their own

may, at trifling expense, be equipped to catch this signal. Our own naval ships have carried it far into the Mediterranean.

But it is not the seafaring people alone who make use of this time signal. It is attracting great and growing attention throughout the country. Jewelers have installed receiving apparatus for the purpose of getting it, and many amateur receiving stations have been established for the receipt of the time and weather reports. A leading jewelers' trade magazine has informed the department that there are not less than 300 jewelers throughout the country who now receive the time signal by radio, and that the number may be expected to grow to about 3,000. The same journal says that although maritime interests may have been the primary reason for the erection of the Arlington station, it will benefit more people on land than at sea. It is a pleasure to record this evidence of the value of this service, as it is also a matter of pride that the first radio time signals ever sent out were from our own naval stations.

Another interesting feature of this free radio service which should be of incalculable benefit to shipping is found in the radio compass now under construction at the Fire Island station, near the entrance to New York Harbor. This device is intended to send out radio signals of such a character that a vessel in a fog may get a close approximation of her "bearing," or compass direction, from the station. By means of observations taken 5 or 10 miles apart it should be possible for the vessel to determine her actual position with fair accuracy. This is the first installation of this type to be made in this country; but a second installation of different type, though answering the same purpose, is projected for the station at Cape Cod. The signals sent out by the radio compass at Fire Island will necessarily be limited as to range, but the Cape Cod installation will allow of a ship calling the station in the usual manner from any distance within the ship's ordinary range and receiving a definite reply as to her bearing from the station. In the case of Fire Island the ship will determine her bearing from the character of the signals continuously emitted; for Cape Cod the station determines the bearing of the ship from her calling signal and sends the information back. If these installations prove as successful as anticipated, the radio operators of ships will become an important part of the navigating force.

One of the most important parts of the naval system, from a public-service point of view, is the Alaskan branch. On account of their isolation the stations in this division are also the most difficult, though not the most expensive, to maintain. Regarded merely as an aid to the important shipping in these waters, their value is very great. In addition they play an important part in the rapidly growing commercial business of inland Alaska. The Army cable

is the only wire connection between western Alaska and the United States, except the very roundabout route through the Canadian northwest. This cable is laid in difficult bottom and is expensive to maintain. Its operation is frequently interrupted, and at such times the radio stations must be depended upon to handle the traffic. The performance of the radio stations has been very creditable in this work, but it is, of course, out of the question for the present few and rather low-powered stations to handle the entire traffic carried by the cable in the busy season. A medium high-powered station to replace the small station at the Puget Sound Navy Yard and an additional station of the same type in Alaska are needed additions to the present military system, and such stations would practically solve the question of uninterrupted commercial communication with Alaska, allowing the abandonment of the cable with a great saving to the Government and a much cheaper service to the public. With the building of the Alaskan railway the need for additional stations will become more urgent.

These are features of our radio installation of more or less general interest, but the military feature is the one with which the department is more intimately concerned. In this field there has been an enormous advance during the past year, and much of this progress, perhaps the greater part, is due to the original work of the department. Commercial progress in the art has been notable, but it must be remembered that the naval problems in radio work have no parallel in commercial work; that foreign Governments guard carefully their own discoveries and developments; and that therefore the Navy Department is dependent upon its own expert talent for military progress. For this reason it is very gratifying to be able to state that we have kept abreast of the times and have made material progress, and that our equipment is such as will place us in a position at least not inferior to the corresponding service of any foreign Government, if we do not, in fact, surpass it.

The erection of the high-powered stations authorized for San Diego, Honolulu, Guam, Manila, and Tutuila has been delayed through inability to acquire title to the private property selected as a site at San Diego. With the present statutory limit as to cost it is impossible to build fully adequate stations unless the cheapest construction is resorted to. An absolutely necessary saving under the circumstances was effected by letting a single contract for the steel towers at San Diego, Honolulu, and Manila, but the delay in connection with the transfer of title at San Diego has delayed the whole chain. The title question has, however, just recently been favorably settled, and proposals for the towers, the largest single item of cost of each station, will be advertised this month. The rapid completion of the Panama Canal made it necessary to proceed with the

canal station independently. Delay has been encountered there also, owing to delinquency of contractors, but the station is now rapidly approaching completion, and it is expected that the first tests of the installation will be held about March 1. It is interesting to note that at the time the Panama Canal station, officially known as the Darien station, was contracted for, the type of equipment selected by the department was practically discredited by a majority of the most eminent technical authorities throughout the world. The Navy Department, however, through its own investigations and with the cooperation of the progressive American manufacturers of the apparatus, had come into possession of certain data that left no doubt as to the choice to be made. The notable scientific development that has taken place during the last year has confirmed the department's action beyond peradventure. In this one contract the direct saving to the Government, due to information resulting from experimental work, was sufficient to cover the total ordinary expenses for experimental work during a period of five years.

DETERMINATION OF LONGITUDE BY RADIO.

The Naval Observatory has added to its record of achievement this year by determining directly the difference of longitude between Washington and Paris, and finds this difference of longitude between the official meridians of these capitals to be

$$5^{\circ} 17' 36''.658.$$

The velocity of transmission of radio signals given by these observations is

$$175,000 \text{ miles per second,}$$

which is probably the best value yet obtained, though owing to the distance (3,831 miles on a great circle) between the stations, which, compared with this velocity, is small, it is subject to a probable error of $\pm 16,000$ miles per second.

These observations constitute the first direct determination of the difference of longitude between Washington and Europe, and it is the first time that radio has been used for trans-Atlantic longitude determinations. Independent observations were made by the United States and French Governments, each having two parties (which interchanged stations at the middle of the observations), one at the United States Naval Observatory and the other at the Observatoire de Paris, using the Navy radio station at Arlington (Radio, Va.) and the Eiffel Tower, respectively, for radio transmission.

SHIPBUILDING WORK AT NAVY YARDS.

Construction of ships in navy yards justifies an enlargement of that policy. It was discouraged formerly because, by an unwise system of accounting, overhead charges, in nowise properly chargeable

against new construction, were added to the actual cost of construction. This made it appear that ships built in navy yards cost much more than in private yards, and the facts were not always in accord with that appearance. In fact, taken as a whole, the contrary is true if no items are charged up to new construction except such as are increased in a navy yard by reason of such construction. It is necessary, also, in order to keep down the prices charged by private contractors, for the Government to be able to build its own ships. It then knows the cost and can do all its shipbuilding unless private yards make reasonable prices. During the past year the department authorized new construction work at navy yards which hitherto have not been so engaged. There is therefore at the present time a greater volume of new shipbuilding work in progress and authorized at navy yards, also a greater number of navy yards so employed in new construction, than ever before in the history of the new Navy. It includes the battleships *Arizona* and *California* at the New York Navy Yard, the fuel ships *Kanawha* and *Maumee* at the Mare Island Navy Yard, submarine *L-8* at the Portsmouth (N. H.) Navy Yard, transport *No. 1* at the Philadelphia Navy Yard, and supply ship *No. 1* at the Boston Navy Yard. There have also been constructed at navy yards during the past year numerous coal barges and several self-propelled oil barges.

Because of the many advantages, it is the policy of the department to develop shipbuilding at navy yards. Amongst said advantages are—

- (1) A check upon the cost of private shipbuilding.
- (2) Increased efficiency and preparedness of the yard working forces due to a more uniform and steady employment of workmen.
- (3) An improved morale of yard service, from master workmen to the unskilled laborer.
- (4) Elimination of the expenses of inspections and trial trips.

Battleship "New York."—The battleship *New York* was fully completed and left the New York Navy Yard on April 26, 1914, ready for service, within the 36 months' constructional period set by the department. Although the keel of the *New York* was laid 4½ months after the keel of a sister vessel building by contract, she left the navy yard ready for active service, several weeks earlier than the contract-built vessel. Further, the actual cost of construction was \$650,000 less than the estimated cost. The department has commended the commandant, construction officer, and engineer officer of the New York yard, for the excellent work performed by them and the divisions under their control in connection with this work.

Submarine "L-8."—As there is only limited competition in the construction of submarines—but two companies in this country being

engaged therein at this time—I entered into a contract June 29, 1914, with the Lake Torpedo Boat Co. for the necessary working plans and license for the Navy Department to build one submarine boat. I assigned the construction of this boat—submarine *L-8*—to the navy yard, Portsmouth, N. H. By reason of the construction of this vessel it is hoped to arrive at a definite knowledge of the actual construction costs of vessels of this character, and thus put the department in a position to build its own submarine vessels in the future should there be any evidence of the absence of competition for submarine contracts. During the coming year it is very likely that it will be necessary to further increase the construction of submarines in navy yards.

PERSONNEL AND ITS WISE EMPLOYMENT.

Officers.—Attention is invited to the report of the Chief of Bureau of Navigation on the subject of personnel. This subject requires the serious and thoughtful consideration of Congress, as well from a point of view of efficiency as of economy. First attention should always be given to the personnel, for the man is greater than the machine. Under existing law officers enter the grade of rear admiral at an age when they have but little time to serve before retirement. In consequence, the Government loses the value of experience gained by officers in command of fleets and squadrons, besides being burdened by a greater cost of the retired list, due to the retirement of a greater number of officers as rear admiral than would be the case if officers entered that grade at an earlier age and had a longer time to serve in it. The number of junior officers is increasing from year to year by the output from the Naval Academy, and has already reached large proportions compared with the numbers in the senior grades. If this condition should continue there would come a time when the real working force of the line of the Navy would be composed of junior lieutenants and ensigns, some of whom will be at the present age and length of service of the captains and commanders. At the same time the length of service in the senior grades would become so short that they would be but stepping-stones to retirement as rear admiral without adequate service having been rendered in them by the officer concerned. The sooner this condition is remedied the more economical will be the cost, the greater will be the efficiency, and the less drastic will be the action required. The department has appointed a board, composed of the Assistant Secretary of the Navy, the Chief of the Bureau of Navigation, and Naval Constructor Taylor, to study this whole question and recommend legislation which will remedy the conditions, having in view efficiency as well as economy.

Enlisted men.—It has been the policy of the department to raise the standard of the enlisted personnel by opening the door of opportunity to the worthy and by weeding out the unworthy, who bring discredit upon the uniform of our sailors. In consequence of this policy, the recruiting officers are enabled to pick and choose among the applicants for enlistment, and a greater percentage of men are reenlisting. When the information is disseminated throughout the country that the position of an enlisted man in the Navy is an honorable one; that none but those of good character are taken; that every man who enlists has the opportunity of getting an education, without expense to himself or his family; that he has the opportunity of learning a useful trade; and that if he wishes to make the Navy his life work he has the opportunity for advancement through the various grades of petty officer, warrant officer, and commissioned officer to the highest rank in the Navy, it is but natural that young men of the highest type of American manhood will be more and more attracted to the Navy, and that their parents will not only encourage, but urge them to enlist. It is not surprising, therefore, that the Navy's authorized complement, which was short for several years, was completely filled in May, 1914, that recruiting had to be suspended in order not to exceed the limit authorized by law, and that a waiting list of applicants for enlistment had to be established. During the fiscal year ended June 30, 1913, the enlisted strength of the Navy reached a total of 48,068, and in the fiscal year ended June 30, 1914, a total of 52,667, showing a net gain of 4,612 men during the year, the number required to man five dreadnaughts and seven destroyers. The percentage of men who, by the character of their discharge, were entitled to reenlist, and who reenlisted during the fiscal year of 1913 was 57 per cent. The same for the fiscal year of 1914 was 65 per cent, or a net gain of 8 per cent. The total number of men serving under reenlistment in 1913 was 16,983. The same for 1914 was 18,640, or a net gain to the Navy of 1,657 experienced men—enough to fully man two of the latest dreadnaughts. During the fiscal year ended June 30, 1914, there were 88,943 applicants for enlistment. Of these, only 18,948 were accepted, or about 1 in 5. Of this number 5,168 had already served one or more enlistments. These figures indicate the high standard required of recruits, and show that there is no lack of fit men who desire to enlist in the Navy.

In view of this gratifying condition, the department has not found it necessary to retain in the Navy men who are undesirable from any point of view, or men who for various personal reasons desire to sever their connection with it in an honorable status. Commanding officers are, therefore, given greater latitude in maintaining

a high efficiency of their commands by ridding the service of undesirable characters, and at the same time the purchase of a discharge is made easy for good men who, for personal or other reasons, desire to return to civil life. The purchase of discharge means only reimbursing the Government for the amount actually expended upon the man before he has given adequate service in return. The man who now enters the service does not feel that he is necessarily bound for four years, whether he likes it or not, or whether unforeseen conditions in his family affairs require his presence at home, but is assured of an honorable means of severing his contract with the Government.

Distribution of personnel.—The proper distribution of the personnel is a question which involves economical problems no less important than are the proper expenditures for material requirements. The main object in all considerations is to attain the highest efficiency in the fighting fleet. Since the upbuilding of the modern Navy began many vessels have been added to the Navy List from time to time, which, although serviceable for war purposes in their day, are now obsolete for modern warfare. Many of these vessels are now in service for patrol duty in southern waters and elsewhere. In case of war many of them would be brought home and turned over to the Naval Militia or other reserve force and utilized in the naval-defense districts on the inner line of patrol. Their personnel would be transferred to ships of fighting value. In time of peace it is desirable to utilize a number of such vessels for patrol and cruising duty, as they are less expensive to maintain than are the vessels designed for modern warfare. As these vessels advance in age, however, their repair bills become greater, and it would be real economy both in personnel and in maintenance to strike them from the Navy List when their crews are needed to man the latest types of vessels designed for the fighting line. Naturally, if all vessels of the Navy, including those referred to, are to be kept in full commission in readiness for immediate war with a first-class naval power, many more officers and men would be required than are at present authorized; and there would be an increasing demand from year to year for more men to man the vessels newly constructed. Happily, however, the necessity for such a condition is not apparent, and the finances of the country should not be overburdened to provide for such contingency.

The General Board in its report (printed as an appendix) recommends in section 43, paragraph (a), that personnel be provided for certain classes of ships named in the report. By wisely utilizing the present enlisted personnel all ships of the classes named can be maintained in full commission without addition to the present enlistment and therefore no legislation is needed to carry out their recom-

mentation. This is clearly shown in a report by the Chief of the Bureau of Navigation, which is printed in the appendix on page 64.

It is estimated that more than 90 per cent of the effective fighting power of the Navy is now fully manned. And this percentage will be increased proportionately as new ships are placed in active service by taking the crews from the older ones of little or no fighting value. It is conservative to say that the dreadnaught *Pennsylvania* in fighting value is worth four or five old battleships and an indefinite number of old cruisers, yet she requires no more men than an old battleship, or two or three of the old cruisers. In other words, 800 men on the *Pennsylvania* are as effective as 4,000 men on old battleships or as many thousands on old cruisers. This comparison should be borne in mind if the question arises whether the personnel should be increased at the expense of new construction. Owing to the financial condition of the Treasury, due to war conditions abroad, the department does not ask for more men this year, but intends, by the distribution of the personnel to the best advantage, not only to maintain the effective fighting strength of the Navy, but to increase it proportionately as ships now under construction are completed and added to the Navy list during the next year. Since March, 1914, the department has placed in full commission 12 more vessels of the older type than were deemed necessary a year ago. These were in addition to the vessels newly built, and were demanded by the situation in Mexico. The department was enabled to meet this increased demand on the personnel by recruiting to the authorized strength during the year and thus gaining 4,600 more men than were in the service last year.

It is for the Congress to establish the effective strength at which the Navy shall be maintained, both in personnel and in material, and for the department to advise as to the proper balancing of the two. For the reasons given above the department is strongly of the opinion that any retrenchment that may be deemed advisable on account of the financial condition of the Treasury should not be in new construction, as it has pointed out that, if deemed necessary, the present authorized personnel can take care of the new ships that will be added to the Navy in the next two years by withdrawing from service old vessels of little or doubtful military value. Later on, however, increase in personnel should keep pace with new construction. In the meantime there will necessarily have to be placed in reserve from time to time vessels which, although not sufficiently up to date for the fighting line, can render good service in coast defense. For the manning of such vessels and of the auxiliaries which would be required with the fleet in time of war, a naval reserve is necessary, and should be organized and trained at the earliest practicable date.

The department will forward for consideration of the Congress at its next session a plan for the organization of such a reserve force from the honorably discharged men of the service. There should be available a trained and organized force ready at the outbreak of war to man all vessels capable of rendering military service. This can only be accomplished by maintaining a reserve, as under our system the country does not contemplate keeping the entire Navy on a war basis in time of peace.

ADMIRAL AND VICE ADMIRALS.

Last January the department recommended that the rank of admiral and of vice admiral be restored. No year goes by in which the Navy is not employed in foreign waters, and it has unfortunately become quite the usual thing for our commanding officer to find himself subordinate to officers of other navies regardless of the relative strength of the force under his command. At no time in our history was this condition more strikingly illustrated than at Vera Cruz. The commander in chief of our Atlantic Fleet found himself subordinate in rank to the representative of another nation, with a much smaller command, when it was of paramount importance that any action should be under our direction. A careful consideration of the matter and its further effect on the improved organization of the fleet again prompts me to suggest that there be authorized one admiral and at least two vice admirals. There is, however, no necessity for an increase in the number of flag officers. The number of rear admirals could, without detriment to the service, be reduced by the number of appointments to the higher grades.

NAVAL MILITIA.

One of the vital necessities of the Nation, in the opinion of Jefferson, was a properly classified and well-led militia, composed in the main of young men. In his First Inaugural he said: "The maintenance of a well-disciplined militia, our best reliance in peace and for the first moments of war, till regulars may relieve them, I deem one of the essential principles of our Government and, consequently, one which ought to shape its administration." Later on we hear him thus advising his brilliant young understudy in statesmanship, James Madison: "It (a militia of this type) is the real secret of Bonaparte's success." Jefferson's far-seeing wisdom on this subject considered our immense extent of coast line, and he said in 1807: "I think it will be necessary to erect our seafaring men into a naval militia and subject them to tours of duty in whatever port they may be." The following year his ideas had crystallized into what he enthusiastically called "our naval-militia plan."

Although the need for such an organization has always been apparent, the Naval Militia of the present had its beginnings so late as the year 1890. On the recommendation of the department the Naval Militia bill, which had endured rough sailing for a number of years past, was enacted into law last February, and the Division of Naval Militia Affairs was organized under the Bureau of Navigation. The nucleus of the division was found in the State organizations where the patriotism of hundreds of young men reared by the seaside had induced them to devote their knowledge of the sea and their energies to this line of service. The new law coordinates these heretofore distinctly State organizations into a Federal arm and, in time of war, places them at the call of the President as commander in chief of the Navy.

Under the law a Naval Militia General Board has been appointed by the Secretary of the Navy to formulate standard professional examinations for officers and enlisted men and to devise plans for carrying out the provisions of the Naval Militia act. The board is composed of the following members, who had demonstrated their interest and ability and enthusiasm: Commodore R. P. Forshaw, Naval Militia of New York, of New York City; Capt. C. D. Bradham, Naval Militia of North Carolina, of Newbern, N. C.; Capt. E. A. Evers, Naval Militia of Illinois, of Chicago, Ill.; Commander J. M. Mitcheson, retired, Naval Militia of Pennsylvania, Philadelphia, Pa.; Lieut. J. T. McMillan, Naval Militia of California, of San Francisco, Cal.

Some increase in the appropriation will be needed to effectively carry out the provisions of the act, chiefly to maintain the annual cruises, in which the personnel receives its actual sea training. A Naval Militia, adequate in personnel and equipment, goes a long way toward avoiding the financial burdens of un-American militarism and yet of proving ready for national defense in case of war. It is surprising how economically such an arm of the service may be maintained. There were in the Naval Militia on July 1, 1914, 596 officers and 7,132 men, of varying efficiency. Not counting the officers, in order to institute a comparison of enlisted men, the cost per man of the Naval Militia, estimated for 1916, is \$54 per man per year. This includes the purchase of arms, uniforms, equipments, etc., for the year, and the pay, transportation, and subsistence of the men for a 15-day cruise. The average cost of one enlisted man in the Regular Navy per year is \$636.97. In other words, the Navy Department can maintain 7,132 of the Naval Militia for approximately \$385,000, against \$4,542,370 to maintain 7,132 enlisted men of the Regular Navy for the same time.

Officers and men of the Naval Militia have cruised on vessels loaned to the States, and also on vessels of the regular Navy, and several officers of the Naval Militia participated in the cruise to Europe of the battleships in December, 1913, and the experience gained has been of great benefit. It is planned to afford all possible opportunity to the members of the Naval Militia for such training as will equip them for efficient service if needed.

A STRONG NAVAL RESERVE.

The country possesses potentially a well-trained and capable naval reserve, though as yet unorganized, that would be immediately available in case of war. Every year a large number of the enlisted men, having served the four-year term for which they contracted, return to civil life. In the past 10 years more than 38,000 of them, after serving at least one four-year enlistment, retired and entered upon various industrial pursuits, and it is certain that at least 25,000 of these would respond to the first call to the colors, the majority of them giving up lucrative positions in order to do so. In every community can be found these well-trained, efficient, intelligent men, who have made good homes for themselves and their families. They never lose their love for the Navy or forget its training or lose the value of its discipline. Experience in the War with Spain in 1898 showed that, while preferring civil life in times of peace, they hold themselves ready to return to the Navy the moment their country should be engaged in war. There are thousands of these former sailors, men fit by physical strength and experience both to officer and man naval auxiliaries, as well as to return to their places as gunners, gun pointers, and other positions on dreadnaughts, destroyers, and submarines. Plans are making to so organize this body of reserves that they will constitute an immediate effective reserve for time of war.

CHANGE IN LAW FOR RETIREMENT PAY.

The Government is generous in the retired pay of officers of the Navy. This generosity in the way of retired pay amounted last year to \$3,152,512.95. So much of that amount as goes to those who have rendered long service or are rendered unable to continue in active service by means of disabilities or illness due to duty afloat is gladly paid by the taxpayers. But this generosity is abused when, as is required under the law, a young officer is retired on three-fourths pay for life when he is well qualified for duties in civil life. Often the law compels retirement because of color blindness, lack of perfect vision, or some other impediment that unfits one for service as a naval officer, but does not greatly, if at all, impair usefulness in other vocations. It is earnestly recommended that Congress pass a graded

retirement law based upon the length of service and which will also differentiate between total and partial disability. In the case of partial disability there should be graded pay based upon the number of years in the service of the United States.

THE EDUCATIONAL SYSTEM AND ITS VALUE IN PROMOTING EFFICIENCY.

The Navy is coming to be "the biggest university in America," as it has been termed since the broadening and deepening of its educational system. "Every ship a school" is now literally true. From the class in the "three R's" of the youngest enlisted men, to instruction at the Naval War College, attended by officers of the highest rank, with real university extension, the Navy is an educational institution, embracing instruction in every line, technical, professional, academic, and practical. In our day the best efficiency is obtained only by the best training, and this applies to the man behind the gun as well as to the officer who is master of tactics. The fine showing made by our men during the cruise of the fleet last winter in the Mediterranean was due, primarily, to the overhauling given to the recruits at the several training stations, where they are taught obedience, promptness, respect for constituted authority, and other qualities that make for self-respect and fit them for their work.

The school for academic, vocational, and technical instruction, referred to in the last annual report, was put into effect January 1, 1914, with a view to supplying the need for academic education and also to provide systematic means by which all enlisted men and warrant officers may receive the assistance and encouragement in technical branches which may be necessary to fit them for promotion in the Navy or which will better prepare them for civil trades at the end of their period of service afloat. Under this plan the ship's routine includes a period each day set aside for instruction, during which no work is required except in cases of emergency or necessity, the period being devoted to the self-improvement of every man in the ship and to the instruction of those who are ambitious for immediate or ultimate promotion. The instruction is under two heads—academic and technical or professional. In the former it is compulsory for all enlisted men not well grounded in the common-school branches who have not completed two years' service in the Navy. The subjects embraced in this department are reading, writing, spelling, arithmetic, geography, and history, and the course is continued for each man until he reaches a satisfactory standard.

In order to make the naval or professional instruction (which is compulsory for all) systematic and general throughout the service, a plan has been prepared prescribing the subjects which every man, irrespective of his rating, should know, and also the subjects which

his special rate requires him to be familiar with. In furtherance of this plan and to perfect the training of the men, the Bluejackets' Manual has been revised and the different chapters rearranged, in order to treat of the several rates of the Navy, every man being required to qualify himself thoroughly on all subjects contained in the chapters devoted to his particular rate. In this manner habits of study and application are bred in our men, which make them more efficient, more ambitious, and conduce to a general uplifting reflected in better discipline and an improved morale. In addition to the Bluejackets' Manual, above referred to, manuals have been prepared by the Pay, Medical and Engineer Departments that are of great assistance in the school work.

Largely as a result of the educational facilities given to the personnel of the Navy, 5 enlisted men have, within the past year, passed the examination for entrance to the Naval Academy; 12 were made pay officers (1913 and 1914); and 9 warrant officers, in the same time, were promoted to ensign.

In line with the general educational scheme afloat, academic studies now form an important part of the instruction at the several training stations, where the facilities for this class of work are excellent. In this connection it may be pertinent to quote from a recent report of an officer on training duty:

"In my enthusiasm for the system as practiced at this training station and the results attained, results which often came under my observation while on sea duty and which now I can fully appreciate, I wish to express regret that all officers interested in the training of men are not given an opportunity to visit this station. The mental development observed in the classroom fully compensates for the time and effort involved, and a double benefit is derived in the recruits' possibilities for future usefulness and a corresponding gain to the naval service."

One year ago the course was extended from three to four months, and in a short time the course at the training stations will be extended from four to six months, so that when the recruits are transferred to the fleet the emphasis in the educational work may be laid more upon the strictly technical subjects.

The "Report of the Commission on National Aid to Vocational Education," bearing date of June 1, 1914, emphasized the importance in instruction in the fundamentals to those who are being trained for usefulness in the Navy or other callings where technical knowledge is essential.

"Vocational education will reduce to a minimum the waste of labor power, the most destructive form of extravagance of which a people can be guilty. This training, to be most effective and

thoroughgoing, should be restricted to persons over 14 years of age *who have laid the foundation of a general education in the elementary school.*" In the light of this expert testimony and experience it can be readily seen that the Navy is doing its full share toward preparing men for their duties both as members of the national defense and as useful citizens after leaving the service. The methods employed, including the educational features, are used with the supreme object of securing efficiency, which is attained only after painstaking and thorough training. It is the testimony of all who have seen the system working at its best that the all-around alertness and responsiveness of the men are promoted by the mental drill given in the schoolroom, where the effects of early neglect in many and of mere rustiness in others are, in a great measure, overcome. This will lead naturally to better and quicker results in the professional work afloat. It is the purpose of the department to make such changes, founded on the experience of one year's trial, as will greatly improve the educational policy, which, in spite of the unavoidable interruptions caused by the service of the fleet in Mexican waters, has fully demonstrated its effectiveness in raising the standard of knowledge of the enlisted personnel, and thereby improving the general efficiency of the naval service. Young officers who teach the enlisted men are greatly helped by this experience, both in the stimulus it gives to their own improvement and in the better knowledge they obtain of the youths who come under their instruction.

The technical schools maintained by the Navy at the beginning of the year, schools equal to any of their kind in the country, were:

The Torpedo and Seaman Gunners' School at Newport, where a thorough course, theoretical and practical, is given in all that relates to the manufacture and handling of torpedoes and ordnance material.

The Machinists' School at Charleston, S. C., in which men are fitted for the duties of machinists, ashore and afloat.

The Electricians' (radio and general) Schools at New York and Mare Island. Graduates of these institutions are ready to perform the many duties that fall to the lot of those charged with the care of the dynamos and radio plants used in the service.

The Artificers' School at Norfolk gives instruction and training in carpentry, blacksmithing, painting, plumbing, and shipfitting.

The Musicians' Schools at Norfolk and San Francisco.

The School for Cooks and Bakers at Newport.

The Yeomen's Schools at Newport and San Francisco.

At these institutions instruction and training are given in trades that are useful both in the service and in civil life. This year to the above have been added two others, one at Newport for the training of the hospital corps of the Navy and the other in Washington

for newly appointed pay officers. These promise to supply a need which has been acutely felt for many years. The first named now numbers 100 pupils, who, after a course of six months in all that pertains to their profession, will be transferred to naval hospitals for duty, where they will acquire further experience in practical nursing and in operating rooms. It is confidently anticipated that this school will result in so high a state of efficiency that the system used in this institution may well serve as a model for the training of the hospital corps of any naval service. It is hoped that a similar school may ultimately be established on the west coast. The course given to the naval pay officers, which extends over a period of 38 working days, includes a complete set of practical accounts, a study of the Naval Regulations, and warnings against the mistakes often made by young and inexperienced officers. There is reason to expect that this school will result in great good to the individuals forming the class and to the Navy in general.

The Naval Academy, while continuing to place emphasis upon technical branches that fit midshipmen for the responsible duty devolving upon naval officers, has this year broadened its course in English and in literature. A liberal education in the mother tongue, in languages, drilling in debate, and practice in composition are stressed second only to subjects that relate to the military and nautical training. A high standard of morale and efficiency is required of midshipmen. No student whose life is not clean and who can not govern his appetite is permitted to remain. Hazing invites immediate expulsion. More liberty and responsibility are now given the midshipmen of the first class, inasmuch as they are now graduated as commissioned officers. With this large liberty and responsibility the midshipmen are demonstrating that the trust reposed in them aids in better discipline and scholarship.

The last naval bill permitted the Secretary of the Navy to appoint annually 15 enlisted men, who could pass the entrance examination, as midshipmen to the Naval Academy. After the passage of that act the time was so short before the examinations that only five qualified for entrance this year. The better educational facilities in the Navy will with every passing year enable ambitious and capable youths to qualify for this instruction and to prepare for commissions in the Navy. They will bring practical experience aboard ship to the academic life at the Naval Academy and will help the other midshipmen while they are in turn being helped by the influences and instruction that train American naval officers capable of the high duties required of them in the service.

An important change in policy has been inaugurated by which the Naval Academy organization is transferred to sea during the summer months. A practice squadron, consisting of three battleships,

with the superintendent in command, visited Europe during what is called vacation in most schools. They were given the opportunity of visiting the most historic and interesting places abroad. While en route to and returning from Europe they were instructed in every duty afloat, thus giving them the instruction of travel when ashore and technical instruction on the voyage. All the officers of the Naval Academy, except a sufficient number to teach and drill the new fourth class, which enters in June, continued their teaching and leadership on the cruise with the midshipmen of the other three classes. This insures a uniformity of instruction along practical lines in continuance of the theoretical and practical teaching given during the academic year.

The post-graduate course at the Naval Academy is continuing its excellent work with a class of young officers, 5 of whom are taking a course in ordnance and 20 in engineering. Other graduates are given post-graduate work in special branches in other institutions.

As pointed out in my last annual report, the apex of the Navy system of education is the War College at Newport, where about 30 officers are now receiving such instruction in the history of naval warfare and practical problems in strategy and tactics as tends to fit them for high commands, while over 400 are taking a similar course by the new correspondence methods introduced last year. It is the department's policy to have, as far as practicable, all officers pursue a course in the science of war, including strategy and tactics, at the Naval War College before they reach the rank which entitles them to high command afloat. When the fleet has its rendezvous for practice at Newport, summer classes bring the advantages of instruction within the reach of scores of other officers, who testify to the benefit derived from even a short course.

THE NAVY NO PLACE FOR THE DISSATISFIED OR THE DERELICTS.

The prison and punishment problems have received thorough investigation and consideration during the year. Formerly all deserters—young and old alike—were sent to prison. Later, disciplinary barracks, so called, which were in reality simply reform schools, were established, where youthful offenders were given instruction and an opportunity to reinstate themselves in the service by good conduct. Long confinement in times of peace for military offenses is not in keeping with the spirit of our age. Such sentences do not improve the men punished or lessen the offenses among their fellows. All sentences have been reduced for purely military offenses during the past year and no youths have been put in prison. They have been sent to the disciplinary barracks and for a shorter period than heretofore. Also a reward for good behavior has been held out both in reducing the length of the period in detention and in

the opportunity to be restored to an honorable status in the Navy. Of the 696 such young offenders now unconditionally restored to duty and restored to duty on probation at Port Royal, 609 are still serving in an honorable enlistment, 14 of whom have reenlisted. At the Puget Sound disciplinary barracks, of the 157 restored to duty 130 have been returned to the service. At Port Royal 89.6 per cent "made good" and at Puget Sound 83 per cent "made good," thus justifying the clemency and the confidence reposed in youths who had left their ships. Few of them could be classed as criminals, but prison sentences for long terms might have converted some of them into criminals.

Desertions did not decrease by reason of severe punishment of the older offenders. Harsh sentences do not decrease infractions. Desertions in time of war can not be treated too seriously. In time of peace it is the duty of the Government to find the best way to promote efficiency, and it has been shown that long sentences for desertion have failed to effect the desired remedy. For more than a year the question of finding better ways has been under consideration, and the department sought the advice of experienced naval officers, alienists, and students of prison management, with a view to abandoning the methods which all navies had deemed essential to maintaining a full enlistment and enforcing discipline. The enforced service of men who were held to their four years' enlistment, though conditions had arisen which made them desirous of leaving the service, was not based on sound principle, and is not a wise policy when the Republic is not in peril. These two questions pressed upon the responsible direction of the Navy Department: "Is such a policy necessary to obtain and retain sufficient men to man the ships? Can the best service be expected of men who are held when they desire to leave?" The more these questions were considered the stronger became the conviction that the time had arrived for a reversal of the century-old policy, and it seemed to be contrary to the spirit of this age to hold on to a traditional method of treating the enlisted personnel.

In May of the present year the enlistment of the Navy for the first time in a long time was fully up to the number permitted to be reenlisted by Congress. The net increase had been more than 4,600 in a year, and this had been easily secured under regulations calling for moral and physical qualities which resulted in a denial of admittance to five out of every six who made application to enlist. A referendum of the admirals and captains of the Navy was held. Letters were addressed to them inviting their views upon the wisdom of effecting a radical change by which, instead of being punished under the old prison system, all sailors who violated the rules of the department by overstaying their leave, drunkenness, and the

like, were to be summarily dismissed from the service—that is, instead of incarcerating them as prisoners, they were to be discharged from the Navy with a dishonorable discharge, and their parents were to be notified of such discharge and the reason for it. There was a large majority of the officers who heartily approved the proposed change, some of them making valuable suggestions, which were adopted in General Order No. 110, which is of far-reaching import and which so modified the regulations as to permit the greatest freedom on the part of the enlisted men, who can obtain an honorable discharge when they have become dissatisfied with the service. It permits them to secure such discharge on request by merely the refund of certain allowances made by the Government upon their enlistment or reenlistment. The order goes a step further, and directs as a general policy that men who have offended by overstaying leave of absence, by drunkenness on shore, and similar breaches of discipline, shall be summarily dismissed instead of being imprisoned.

The order is a wide departure from former methods of dealing with the enlisted personnel who have not desired to remain in the service. Enlistments in the Navy have always been for a definite period—at present four years—and it has always been difficult and at times impossible for men to terminate their contract of enlistment by honorable discharge before the enlistment expired. If a man remained absent from his ship or duty after having been granted leave, this made him a deserter, and on conviction involved a prison sentence. The old plan involving long imprisonment created among enlisted men a feeling that during their term of enlistment, if they desired to leave the Navy, they were as if in bondage. Furthermore, this feeling on the part of the men that their services were required and they would be retained in the Navy regardless of their conduct doubtless, in a large measure, accounted for much of the absence over leave or absence without leave and other offenses which would never be tolerated in any well-organized business establishment on shore, but which at times have been quite prevalent in the service.

It was recognized in making the order that the Navy is in time of peace a very large business organization; that any feeling of compulsory detention or bondage on the part of the enlisted force is undesirable; that the service offers so many advantages, especially to those desiring to make of it a life work or secure a practical education, it can be kept fully recruited with men who are willing to obey, and the department therefore now holds that overstayed leave, drunkenness on shore, and similar offenses indicate that the offender is unfit for the service. These considerations led to the issuance of this new general order for summary discharge rather than imprisonment in

the matter of desertion, and to facilitate honorable discharge for those who are dissatisfied. In order not to be too drastic the order permits commanding officers, in their discretion, to hold a first offender on probation on reduced pay for periods of from 6 to 12 months, but on repetition of the offense he is summarily discharged. In order to promote the reformation of men who may lose pay by sentence of court-martial, it is provided that those who serve through an enlistment and receive an honorable discharge on its termination will have remitted all pay lost by sentence of court-martial during that enlistment.

The order is founded on business principles. The Navy is a business organization and an educational institution, as well as a fighting machine. It has no time for the drunkard, be it ashore or afloat, nor for those who in violation of their oath are not present and ready for duty when required. Such offenses indicate inherent unfitness for the naval service. The order improved discipline generally throughout the service. It reduced the number of naval prisoners and placed the enlisted personnel of the service on much the same basis as that occupied by the employees of any large industrial corporation. Considering the fact that the armies and navies of the world are notoriously conservative and slow to follow the gradual but none the less certain changes which are daily taking place in modern thought and methods, this is a radical step. It will weed from the Navy the undesirables and raise the general standard of the enlisted personnel and, even more than heretofore, render an honorable discharge from the service a credential of reliability, zeal, and efficiency.

The naval prisons and disciplinary barracks last year cost over \$1,000,000. Under the new plan this cost will be greatly reduced, and before a great while will be very small. A wise man once said that the worst possible use that could be made of a man was to hang him. It has been demonstrated that it is economically unsound in times of peace to spend large sums upon holding men in prison whose conduct has shown they are unfit for naval service. The department now summarily discharges such as show themselves to be unfit, lifts up the service, and gives an opportunity to those who are discharged to find positions in civil life where they may retrieve themselves and render better service than by being confined in naval prisons.

GENERAL ORDER NO. 99.

On the 3d of February, 1899, Hon. John D. Long, Secretary of the Navy in McKinley's administration, "after mature deliberation," as he said, issued General Order No. 508, forbidding officers or commandants "to allow any malt or other intoxicating liquor to be sold

to, or issued to, enlisted men, either on board ship or within the limits of navy yards, naval stations, or marine barracks, except in the medical department." On July 1 of the present year an order, No. 99, went into effect in these words: "The use or introduction for drinking purposes of alcoholic liquors on board any naval vessel or within any navy yard or station is strictly prohibited."

"Secretary Daniels's order," to quote ex-Secretary Long, "is the natural sequence of my own prohibiting liquors for enlisted men in the Navy," and this former Secretary added: "It is more than likely that foreign vessels will be led by this example to consider and imitate it, so that the drink evil in foreign navies may be put in process of elimination as well as our own." Within a few weeks after that prophecy not one but several foreign countries caught step and fell into line, some of them going so far as to prohibit the use of liquor in both army and navy. Of the new and far-reaching order in Russia, the most sweeping of all, Capt. N. A. McCully, of the United States Navy, naval attaché at Petrograd, writes: "Further acquaintance with Russia's anti-liquor law convinces me that it is one of the best things that ever happened in Russia. I have not met one single Russian who is not very much in favor of it."

Lord Kitchener, upon being appointed Secretary of State for War, issued this message to the soldiers of the expeditionary force: "Your duty can not be done unless your health is sound. So keep constantly on your guard against any excesses. In this new experience you may find temptation in both wine and women. You must entirely resist both temptations."

A cable from Panama, dated November 14 of the present year, conveys the information that Col. Goethals had on that day issued an order placing all persons engaged in canal transportation on a strict temperance basis. The order provides that all persons employed on the canal who have marine licenses must abstain absolutely from liquor. This includes pilots taking ships through the canal, the captains of tugboats, mates, and others.

The Surgeon General of the Army, Dr. Gorgas, whose sanitation work on the Isthmus gave him world-wide fame, in his annual report says that the rate of alcoholism in the Army was lower in the last fiscal year than since 1870, and he makes the observation that "this improvement strengthens the contention of those who disapprove the restoration of the canteen," and adds: "It is believed that the Army will be well rid of any system of supplying alcoholic drinks. There really appears to be no more reason why they should be sold on Government reservations to soldiers than there appears to be any reason for the regulation issue of grog of former days." One reason for the decrease of alcoholism in the Army, according to Dr. Gorgas,

is "the effect produced by the act of Congress stopping the pay of officers and enlisted men when incapacitated for duty on account of sickness due to drug addiction, alcoholism, or other misconduct." Similar legislation was recommended last year for the Navy and Marine Corps, and the experience of the Army is an unanswerable argument for applying the same law to this branch of the service.

In announcing the order that ended the wine mess, as it was called, I made the following statement: "There should not be on shipboard, with reference to intoxicants, one rule for officers and another and a different rule for the enlisted personnel. I believe experience has demonstrated that a uniform rule should prevail in the Navy for all who enlist in the service, from the highest rank to the youngest enlisted man or officer who comes into the service, and that the abolition of the wine mess will be justified." Already many who did not welcome the new order are its strong advocates.

In connection with the new and better habits in all navies, it may be well to call attention to the statement of Emperor William of Germany, who, speaking some years ago to naval cadets at Murwick, recounted that when he was a cadet "It passed for extraordinary cleverness in the youth for him to imbibe a large quantity of alcohol and bear it. I, as a young officer, had occasion to see such examples, but never myself to participate." He went on to point out that such conduct "suited the Thirty Years' War, but not now," because "the service in my navy has reached such a height of strenuousness as you can hardly surpass," and he added:

"The next war and the next sea battle demand sound nerves of you. Nerves will decide. These become undermined through alcohol, and from youth up by the use of alcohol endangered.

"You will later have opportunity to see the target ships and the action of the modern projectiles upon the ships, and therefrom you can picture the conditions during battle. You will see horrible destruction when you are upon these.

"Here it calls: 'Steady nerves and a cool head!'

"That nation which consumes the least quantity of alcohol wins; and that you should be, my gentlemen. And through you an example should be given the crews.

"And in consequence of this I expect of you that even now at the naval academy and on board ship in all comradeship and friendliness in no way disturbed among yourselves you take heed thereto and provide that the indulgence in alcohol be not counted as belonging to your privileges."

In his speech at Gibraltar in 1904 Sir Charles Beresford, C. B., gave utterance to a sentiment that finds more and more approval, just as Emperor William's address to the German youths entering

the Navy is accepted as necessary for the best efficiency of naval officers. Lord Beresford, as he now is, said at that time:

"When I was a young man I was an athlete. I used to box a great deal, ride steeplechases and races, play football, and go through a number of competitive sports and pastimes. When I put myself into training, which was a continual occurrence, I never drank any wine, spirits, or beer at all, for the simple reason that I felt I could get fit quicker without taking any stimulants. Now, I am an older man and have a position of great responsibility, often entailing quick thought and determination and instant decision: I drink no wine, spirits, and beer, not because they do me harm, not because I think it wrong to drink, but simply because I am more ready for any work imposed upon me, day or night; always fresh, cheery, and in good temper."

The order No. 99 was not issued by the Secretary until, at his request, the Surgeon General had made a report showing its wisdom. Not only has the order been approved by other nations, but the medical authorities of the world have given approval. In closing an editorial approving the action of the Navy, the Journal of the American Medical Association used these words:

"The development of scientific methods, and the use of instruments of precision in warfare have made alcohol absolutely detrimental to the modern naval man. Sea fights in the past were won by brute hardihood and physical endurance, which could, perhaps, be stimulated, temporarily at least, by large doses of alcohol. The modern warship is a floating laboratory of delicate and accurate machines. The gun pointer who directs a 14-inch rifle on the modern man-of-war needs not only personal courage, but also absolute steadiness of nerve, clearness of vision, and fine muscular coordination. All these things modern physiology has shown to be impaired by even small amounts of alcohol. The engineer who superintends the machinery at the heart of the modern battleship, the man at the wheel who directs its course, and the captain or the executive officer on the bridge, as well as the most humble member of the crew, need at all times to be in a condition of maximum physical and mental efficiency. Intoxication in the naval officer to-day might easily be as disastrous as cowardice and treason. Surg. Gen. Braisted's recommendations and Secretary Daniels's order are simply in line with our growing knowledge. The nation needs on its battleships to-day the most capable, clear-headed, cool-brained, and steady-handed men, and these men are not found among habitual or occasional users of alcohol in any form. Entirely aside from moral or sentimental reason, and considered simply as a scientific regulation in the interest of efficiency, this order will recommend itself to the vast majority of the American people."

RELIEF WORK OF THE NAVY.

The war in Europe surprised several hundred thousand Americans abroad, some without money and others unable to cash their American credits. The demoralized steamship service caused serious apprehension on the part of relatives and friends for their safe return. Congress made an appropriation to secure the return of Americans to their homes and for such relief as might be found necessary. This relief work was under the direction of the Secretaries of State, Treasury, War, and Navy, and the relief rendered was most grateful to Americans abroad. The Navy was privileged to participate in the characteristically zealous efforts of the Government of the United States to take care of its citizens by furnishing the *Tennessee* and the *North Carolina* to carry the officers in charge of relief and the funds, and when there was no further need for these ships in this special relief work they were ordered to the Mediterranean for the protection of Americans and American interests.

It is a matter of gratification that the Navy Department was enabled to be the carrier of the thousands upon thousands of Christmas presents collected by the press of America for the children of the warring countries of Europe. It chanced that it was necessary to send the collier *Jason* with coal for the *Tennessee* and *North Carolina* in the Mediterranean, and its large carrying capacity enabled the department to take to these children of Europe the gifts from the children of America. Their beautiful spirit of generosity touched the people on both continents. The naval officers, marines, and enlisted men entered cheerfully into this noble work, and within a few days these tokens of sympathy will be distributed to many children who have felt the pinch of poverty that follows in the wake of war.

THE OPENING OF THE PANAMA CANAL.

The great maritime powers of the world have been invited, and a number of them have accepted the invitation, to participate in the exercises incident to the opening of the Panama Canal. The international fleet and the ships of our own Navy escorting it will assemble at Hampton Roads in February, 1915, where they will be reviewed by the President of the United States. After the review they will sail for Cristobal; thence they will proceed to Balboa, on the Pacific side. The President will sail for the canal from Hampton Roads early in March and will reach the canal in time to board the *Oregon* with a distinguished party, including Capt. Clark, commander of the vessel on her famous trip around the continent, and that historic vessel will lead the international fleet through the canal. President Wilson will exchange visits with the President of the Republic of Panama, after which he will sail for California at the head of the fleet.

THE NAVY'S EXHIBIT AT SAN FRANCISCO.

In pursuance of its policy of publicity whereby the people may become better acquainted with the equipment and agencies of American defense, no pains have been spared to have the Navy represented at the Panama-Pacific International Exposition at San Francisco next year. The effort of the department has been to have the Navy itself in a large way appear at the exposition, and to that end a plan has been wrought out whereby a division of battleships, showing the principal types of modern men-of-war, including the hospital ship *Solace*, is to be anchored in the Golden Gate, while at the same time the historic *Oregon* and *Olympia* are to be moored alongside the exposition wharves. Exhibitions of aeronautics and submarine diving are contemplated, while the Marine Corps is to maintain a model camp. The 1915 cruise of Annapolis midshipmen will take place through the Panama Canal to the exposition. In addition to having the Navy, as it is, thus represented in force, in the liberal arts and machinery buildings will be set forth, both by an artistic cyclorama and by a series of warship models, the evolution of our Navy. The educational work of the Navy will be illustrated by a complete display of school pictures, as well as classes in daily recitation on ships in the harbor, and there will be many other features illustrative of the Navy's service to the country.

THE BARRY, MACDONOUGH, AND KEY ANNIVERSARIES.

As a people we have been less liberal in bronze and marble to the memory of our great sea-fighters than we have to statesmen and warriors. With the modern world-wide awakening to the importance of sea power, there has come in our country a new sense of appreciation of what Lincoln called "the web-footed arm" of the service. And this is well, for in our own history naval victories have more than once illumined a dark and gloomy hour in our early struggle for liberty, and dissipated by their brilliance the shadows of despair. The past year has fittingly been marked by several notable anniversaries in which due honor has been rendered to men who won glory for the Republic on the waters.

In May, in the presence of the President of the United States and distinguished guests, there was unveiled in Franklin Park in the Nation's Capital a bronze statue of John Barry, first commissioned captain in the American Navy, a pioneer officer whose daring and courage achieved heartening successes, and whose contemptuous spurning of a golden bribe must always be an inspiration to American youth.

On the shores of Lake Champlain, in September, the celebrations at Vergennes, Vt., and at Plattsburg, N. Y., rendered merited honor

to the joint heroes of that momentous and decisive conflict. The combination of the elements of foresight and preparedness with desperate courage, exhibited by Commodore Macdonough, commanding the Navy in that critical hour, saved the day, and as the last cloud of battle cleared away the eye of the sun saw the young Republic still free—and a new name on the roster of the Vikings.

In the same month of September the anniversary of Francis Scott Key's soul-inspiring song, "The Star-Spangled Banner," was brilliantly observed in Baltimore. The Navy was pleased to lend for the occasion that hoary centenarian of the sea, with a star-spangled name, the U. S. S. *Constellation*, rich in her record of Revolutionary victories, achieved under the flag immortalized by Key, and which shared the honors of the anniversary with the poem itself.

The Navy was fittingly represented in these festal hours of patriotism, and it was the privilege of the Secretary to participate in them all. The Union can not have too many of them. They fan the fires of love of country in the hearts of the people; and are an earnest to generations to come that the spirit of the fathers is the spirit of the sons!

CHAPLAINS.

The second session of the Sixty-third Congress signalized its interest in the spiritual welfare of the men of the Navy by authorizing the first increase in the corps of chaplains obtained since 1846, when the Navy was but half its present size. Last spring, when there was a possibility that men from all our battleships would see active service, there was not sufficient number of chaplains with the fleet, though every available one was ordered to duty. The increase allowed by last year's bill will enable the department in the future to assign a chaplain to every battleship. The new chaplains, in accordance with a provision of the law, will be appointed temporarily for three years, after which time they may be formally commissioned by the department.

MONEY ORDERS FOR BLUEJACKETS.

Since 1908 Navy mail clerks have been serving as postmasters aboard ship, but the one thing lacking to render postal facilities complete was the money-order feature, working a serious hardship to sailors who wished to send regular remittances home, as many thousands of them do. As a result of inclosing currency in letters periodical losses in transmission not infrequently caused actual hardships. The subject was recently taken up direct with the Postmaster General, who gave it his hearty approval, and as a result the system was inaugurated on board the ships of the Navy on the 1st day of October.

SAILORS' CLOTHING AT COST.

The condition of the Clothing and Small Stores Fund warrants a substantial reduction in the prices at which issues are made to the enlisted men, and during the coming year, therefore, all such issues will be made at cost, which means an annual saving to the men of about \$70,000.

THE OCCUPATION OF VERA CRUZ.

On the 14th day of April orders were issued for the fleet to proceed to Mexican waters. The culmination of the indignities upon this country by Gen. Huerta in Mexico came in the arrest of the paymaster and boat's crew of the *Dolphin* at Tampico on the 6th of April. That ship carried, both at her bow and at her stern, the flag of the United States. Admiral Mayo, in charge of the naval vessels at Tampico regarded the arrest as so serious an affront as to warrant the demand that the flag of the United States be saluted with special ceremony by the military commander of the port. "The incident," said the President, in his special message to Congress delivered on the 20th of April, "can not be regarded as a trivial one, especially as two of the men arrested were taken from the boat itself—that is to say, from the territory of the United States—but had it stood by itself it might have been attributed to the ignorance or arrogance of a single officer. Unfortunately, it was not an isolated case. A series of incidents have recently occurred which can not but create the impression that the representatives of Gen. Huerta were willing to go out of their way to show disregard for the dignity and rights of this Government and felt perfectly safe in doing what they pleased, making free to show in many ways their irritation and contempt.

"A few days after the incident at Tampico an orderly from the U. S. S. *Minnesota* was arrested at Vera Cruz while ashore in uniform to obtain the ship's mail, and was for a time thrown into jail. An official dispatch from this Government to its embassy at Mexico City was withheld by the authorities of the telegraphic service until peremptorily demanded by our chargé d'affaires in person. So far as I can learn, such wrongs and annoyances have been suffered to occur only against representatives of the United States. I have heard of no complaints from other Governments of similar treatment. It was necessary that the apologies of Gen. Huerta and his representatives should go much further, that they should be such as to attract the attention of the whole population to their significance, and such as to impress upon Gen. Huerta himself the necessity of seeing to it that no further occasion for explanations and professed

regrets should arise. I therefore felt it my duty to sustain Admiral Mayo in the whole of his demand and to insist that the flag of the United States should be saluted in such way as to indicate a new spirit and attitude on the part of the Huertistas." Continuing, the President declared, "Such a salute Gen. Huerta has refused," and he asked and obtained approval from Congress to use the armed forces of the United States "in such ways and to such an extent as may be necessary to obtain from Gen. Huerta and his adherents the fullest recognition of the rights and dignity of the United States."

Before the fleet, under Rear Admiral Badger, reached the Mexican shores, it became necessary to issue orders to Admiral Fletcher, the ranking officer, to seize the port of Vera Cruz. In the early dawn of the 21st of April the sailors and marines landed, in pursuance of orders given, and seized the customhouse under a rain of fire. This shooting came not from the army of Huerta which had left the town, but from "snipers," who shot down our men from places of ambush. With courage which can not be too highly praised, the officers and men met the fire which poured upon them from unexpected quarters. In a remarkably short time they silenced all who opposed their entry, established order, and urged the civil authorities to resume their regular civic functions. Upon their unwillingness to do this, Admiral Fletcher took charge of the administration of the civil government, maintained order, and so reassured the people that they soon renewed their customary avocations. Upon the arrival of the Army, the Navy turned over the duty of occupation to that arm of the service, with a record of wise management which has been continued by the Army. The marines remained with the forces of occupation and won fresh laurels by their service. Having in mind the spirit of self-repression under provocation shown by Admiral Fletcher, and by him magnetically infused to his command, the Commander in Chief of the Army and Navy, in an address to the Annapolis cadets, paid this tribute to the admiral, who, because of his statesmanship and military qualities, happily blended, was eventually made commander in chief of the Atlantic fleet:

"I have been in almost daily communication with Admiral Fletcher, and I have tested his temper. I have tested his discretion. I know that he is a man with a touch of statesmanship about him, and he has grown bigger in my eye each day as I have read his dispatches, for he has sought always to serve the thing he was trying to do in the temper that we all recognize and love to believe is typically American."

The story of the bravery of the bluejackets and marines on that fateful morning has been told in prose and in poetry. The names of the 19 who sealed with their blood their devotion to their country

are written high on the roll of the immortals of their country. Here are the latest heroes of the Navy who fell at Vera Cruz:

George Poinsett of Pennsylvania,
Louis F. Boswell of Illinois,
Gabriel A. DeFabbio of New York,
Francis Patrick DeLowry of Pennsylvania,
Frank Devorich of Iowa,
Elzie Clingman Fisher of Mississippi,
Louis O. Fried of Louisiana,
Esan Hursh Frohlichstein of Alabama,
Dennis J. Lane of New York,
John Schumacher of New York,
Charles A. Smith of Pennsylvania,
Albin E. Stream of New York,
Walter L. Watson of Massachusetts,
Clarence R. Harshbarger of New York,
Henry Pulliam of Virginia,
Daniel Aloysious Haggerty of Massachusetts,
Samuel Marten of Illinois,
Rufus Edward Percy of New Hampshire, and
Randolph Summerlin of Georgia.

They gave not only all they were but all they hoped to be. Of the 19 who answered with the cheerful "Aye, aye, sir," on that fateful morning, 13 were 22 years of age or under. The oldest was 36, the youngest 19. Their average age was but a little over 23. They "were young, and suddenly beheld life's morn decline." The first to make the noblest contribution that man may make was George Poinsett, of the Commonwealth of Pennsylvania. The bodies of these brave sailors and marines were brought back to America, and every honor that might have been shown to an admiral was given them by their country and their countrymen. The ships bearing their bodies were escorted to New York City by naval vessels as a guard of honor, and a million people stood with uncovered heads as the funeral procession passed through the metropolis. The President of the United States, the governor of New York State, the mayor of New York City, the Secretary of the Navy, distinguished Navy and Army officers, and others assembled to express the national loss and the Nation's pride that now, as in every former period, it possessed men who were ready to serve their country and to give their lives in defense of the flag. In his address that day the President of the United States said:

"The feeling that is uppermost is one of profound grief that these lads should have had to go to their death; and yet there is mixed with that grief a profound pride that they should have gone as they did, and, if I may say it out of my heart, a touch of envy of those

who were permitted so quietly, so nobly, to do their duty. Have you thought of it, men? Here is the roster of the Navy—the list of the men, officers and enlisted men and marines—and suddenly there swim 19 stars out of the list—men who have suddenly been lifted into a firmament of memory, where we shall always see their names shine, not because they called upon us to admire them, but because they served us, without asking any questions and in the performance of a duty which is laid upon us as well as upon them. * * * As I stand and look at you to-day and think of these spirits that have gone from us, I know that the road is clearer for the future. These boys have shown us the way, and it is easier to walk on it because they have shown us how. May God grant to all of us that vision of patriotic service which here, in solemnity and grief and pride, is borne in upon our hearts and consciences!”

Medals, with letters of commendation to be attached to their records, have been sent by the Secretary of the Navy to all the enlisted personnel who were recommended for bravery and high service by Rear Admiral Fletcher. It is earnestly hoped that Congress will vote medals to the officers who showed gallantry. They can be thus honored only by an act of Congress. It is also recommended that Congress authorize the Secretary of the Navy to give such honor to officers who deserve it in the future without compelling those deserving such recognition to await the assembling of Congress and the passage of legislation authorizing the award of these medals of honor.

PROOF OF THE PREPAREDNESS OF THE NAVY.

The remarkable demonstration of the all-around efficiency of the Navy when the orders to Mexico were given won commendation at home and abroad. When Rear Admiral Badger, commander in chief, received the orders, he said: “I do not know what we will be called upon to do, but we are ready.” Within 24 hours after the directions to sail were flashed from the wireless at Arlington to the commander in chief the gray fighters were ready, and the giant ships slipped swiftly seaward and hurried to the waters of the Gulf. When needed to uphold the honor of the flag and the interests of the country, the Navy was ready. There were tens of thousands of tons of coal, supplies, provisions, ammunition, and war equipment to be gotten aboard the grim steel fighters, innumerable administrative details to be attended to, and a score of ships to be put in readiness, but, though there was fervent but perfectly disciplined activity, there came into play tense precision, trained energy of mind and eye and hand, so that almost before the country realized the purport of the orders, the work of preparation had been ended and the ships were en route to their destination. It showed the country that

the Navy is always ready—it lives in a state of preparedness—and that when the emergency arises every man in the Navy and the Marine Corps shows such enthusiasm and resourcefulness as to quicken the pride of their countrymen in them. The records show that one giant ship took on 1,800 tons of coal, provisions for 1,000 men for six weeks, huge quantities of various supplies, gathered up officers and men ashore and on leave, and was tugging at her anchor awaiting only the signal to proceed, all in a bare 12 hours. The get-away of the fleet and its efficiency in the waters of Mexico illustrate the energy, brain work, and teamwork which give signal proof of our national efficiency, an efficiency which is emphasized only to illustrate what may be expected of the Navy whenever it is called into action.

THE GOOD WORK OF THE MARINE CORPS.

The Marine Corps, with its 9,991 men and 339 officers, has added to its record for high service this year. It responded with characteristic promptness and efficiency to every call imposed upon it during a year in which its services were in almost constant demand. The Marine Corps saw service in Mexico, Nicaragua, Santo Domingo, and Hayti. At Vera Cruz they participated in the actions preceding our occupation of that city, and upon the arrival of the Army the marine brigade was incorporated in the command of Gen. Funston. At Hayti and Santo Domingo their services were of another character. Few were landed on Haytian soil, but during the elections at Santo Domingo a force of marines cooperated with State Department representatives at the polls. They have continued to garrison Managua, Nicaragua, since its occupation two years ago.

Last January and February the First and Second Regiments held the first advance base practice in the history of the corps. Plans for the work had been maturing for several years. The fleet participated in the exercises, which were most successful, and advanced-base drills, in the field and in cooperation with the fleet, will hereafter form a part of each year's drills. In furtherance of these plans and upon the recommendation of the General Board of the Navy, a redistribution of Marine Corps forces is about to be concluded. Several minor garrisons have been reduced and the proposed station on the Isthmus of Panama given over to the Army. This will permit the assembling of larger bodies of marines at Philadelphia, Norfolk, and San Francisco, and it is expected that much better results will be achieved thereby.

HEALTH CONDITIONS AT VERA CRUZ.

The health conditions of the fleet in Mexican waters and of the marines at Vera Cruz with the Army during the year have been

a source of great satisfaction to the department. Notwithstanding the long and monotonous duty, with periods when recreation ashore could not be given, and with all the attendant dangers of a tropical climate, both ashore and afloat the health of the personnel has been better than the average. In the fleet, with a complement as high at times as 20,000 men, and distributed on all types of vessels, from the largest man-of-war to torpedo boats, the rate of disease has fluctuated from 1.5 to 0.9 per cent. There have been no epidemics, nor any unusual manifestations of disease or unusual mortality, except the deaths in action (19 in number) at the time of the taking of Vera Cruz. Every preparation possible was made by the medical department at very short notice for this expedition, and the result reflects great credit on the medical department as a whole and on the medical officers of the individual ships.

The health of the Marine Corps during the long occupation of Vera Cruz has been unusually good. An average force of about 2,900 men has been maintained for service with the Army, and the average sick rate from May 13, 1914, to November 4, 1914, was 2.08 per cent. The highest rate was 3.3 per cent, on June 3, 1914, and the lowest rate was 1 per cent, as reported in the last returns for November 4, 1914. Since the early occupation of Vera Cruz there appears to have been a uniform improvement in health conditions. Finally, at the close of the long period of Mexican activities, the hospital ship *Solace*, after embarking all the sick demanding transfer home, not only from Vera Cruz, but from Guantanamo, Cuba, and the ships at Haiti, reports a total of 48 patients, of whom only 4 are stretcher cases. The Major General Commandant of the Marine Corps, writing to the Surgeon General, voices just appreciation for the skill and efficiency of the splendid medical corps:

"While you will undoubtedly receive official reports which will mention every detail of their work, I feel it my duty and pleasure to state to you that, in my opinion, the splendid showing as evidenced by the very small percentage of sick, both in Culebra and Vera Cruz, is very largely due to the Medical Corps of the Navy, who rendered such valuable assistance at all times, and if consistent with your ideas I think something should appear on the officers' records to show the appreciation of their excellent work."

THE HEROISMS OF PEACE.

Peace has her heroisms no less renowned than war. The year in the Navy has been interspersed with many individual acts of daring and presence of mind. Three officers and 59 sailors imperiled their lives to rescue men from drowning, for the commonest call to heroism aboard ship, now as ever, is the cry of "Man overboard."

Many other officers and men share in the brilliant rescue work of the year, for which either medals or letters of commendation were issued as expressive of the department's gratitude, and their names are printed as a roll of honor in the appendix to this report. These calls to perilous and self-sacrificing service included among others the rescue of men overcome by coal gas in a collier's bunkers; extinguishing fire in a war-head filling house, and again in a gasoline tank; rendering assistance to a stranded vessel; entering the boiler of a battleship on its trial; bravery in engine room after collision and explosion; entering the hold of a vessel filled with poisonous fumes in order to rescue shipmates; disarming or rescuing insane men, and the like. A most unusual achievement for which departmental gratitude was called forth was a piece of impromptu civil engineering on the part of a hospital steward and a blacksmith in constructing a five-mile trail over a well-nigh impossible route in Alaska, for the purpose of transporting coal to the coast by sled in the dead of a far-northern winter, and this task was achieved under the eye of a Navy surgeon.

Carlyle, in his "Hero Worship," depicts the hero, in the six chapters of the book, respectively, as divinity, as prophet, as poet, as priest, as man of letters, and as king. The great author might well have added a chapter on the hero as man of the sea. No ear is keener to hear the cry of the drowning and no heart is less appalled over the sudden apparition of death in its most hideous forms than the sailor's. Is it not this dauntless spirit, which we thus see in the bud in time of peace, that bourgeons forth into the full flower of bravery in the hour of national defense?

HOPE FOR INTERNATIONAL AGREEMENT.

In my last report the hope was expressed that the day would come when the big-navy building nations would reach an international understanding to put an end to the feverish competitions in the building of costly engines of destruction. The naval appropriations in our own country have doubled in a dozen years, and have gone up by leaps and bounds in other countries. If this mad rivalry in construction goes on the burden will become too heavy for any nation to bear. The present war, involving most of the big-navy countries of Europe, does not render such an international agreement impossible. On the contrary, there are reasons to hope that the horrors and cost of this war will hasten the coming of the day for a conference of the powers to consider the safe steps to be taken to reduce armament and dreadnaughts and submarines. It may not be opportune at this time for our Republic to move for such a conference, but when peace smiles upon this war-torn globe there may

be reserved for America the coveted honor of initiating a movement which will make possible a reduction of fighting craft without imperiling the rights of any peoples. Is it too much to believe this generation will witness such an agreement, and men now living will see the good hour prophesied by Tennyson when—

“the war-drum throb'd no longer, and the battle-flags were furled,
In the Parliament of man, the Federation of the world.”

A PROUD AND SOLEMN YEAR.

This has been a proud and solemn year for the American Navy. It has shown that it knows how to bear itself under fire, how to obey orders, how to maintain the honorable traditions of the service. Allow me, Mr. President, to congratulate you as its Commander in Chief upon the record it has made, upon its preparedness for duty, upon the reliance you can place upon it in any time of national need.

Sincerely, yours,

JOSEPHUS DANIELS.

APPENDICES.

APPENDIX A.

REPORT OF THE GENERAL BOARD.

DEPARTMENT OF THE NAVY,
GENERAL BOARD,
Washington, November 17, 1914.

To: Secretary of the Navy.

Subject: Increase of the Navy; building program and personnel, 1916.

Reference: Department's indorsement 8567-146:11, September 22, 1914.

Article 167, paragraph 3, United States Navy Regulations, 1913, reads as follows:

"It (the General Board) shall consider the number and types of ships proper to constitute the fleet, the number and rank of officers, and the number and rating of enlisted men required to man them, and shall advise the Secretary of the Navy respecting the estimates therefor (including such increase as may be requisite) to be submitted annually to Congress."

The General Board in compliance with duties thus imposed upon it by this and similar paragraphs in preceding regulations has from year to year recommended to the department a building program and personnel legislation that would, in its opinion, produce a fleet that would be adequate to the needs of the Nation.

2. In view of conditions now existing the General Board has given particularly careful thought to its recommendations for the coming fiscal year. To make its position clear and place before the department the full meaning of its recommendations, the General Board considers it necessary to review at length all that has preceded these recommendations and led up to them.

CONSISTENT POLICY OF GENERAL BOARD SINCE 1903.

3. In its letter No. 420-2, of October 17, 1903, the General Board, after mature consideration of our national policies and interests, and of those of the other leading naval nations of the world, expressed its opinion of what the ultimate strength of the United States Navy should be, and recommended a program for the completion of the Navy to the strength then believed adequate by 1919.

4. The basis of the fleet recommended was 48 battleships; and lesser units and auxiliaries were recommended in the proportions believed to be best to complete a fighting fleet, in the light of the best information obtainable at that time. The influence of the progress made by new inventions and the discovery of new ideas in the development of the lesser units have changed the proportions and character of some of these lesser units; and have, to that extent, modified the original recommendations of the General Board. But the fundamental fact that the power of a fleet is to be measured by the number and efficiency of its heavy fighting units, or battleships, has remained

unchanged. The recommendations of the General Board heretofore submitted have consistently followed a policy looking to the creation of a fleet founded on a battleship strength of 48, in accordance with its recommendation made in 1903, of what it considered an adequate fleet to meet the naval needs of the Nation and be an adequate insurance against aggression.

5. The General Board believes that these recommendations made from year to year have been both misunderstood and misconstrued in some quarters. An impression prevails that the General Board has always recommended an annual continuing building program of four battleships, with accompanying lesser units and auxiliaries. A brief analysis of the recommendations made by the General Board, beginning with the original formulation of its policy in 1903, to the present time, will demonstrate the error of this impression, and show that the recommendations made were consistent and contemplated the creation of a battleship fleet of 48 vessels by 1919, *but did not involve a constant and fixed program of building four battleships a year.*

BATTLESHIPS.

6. In October, 1903, the Navy had 10 battleships completed and 14 more either under construction or authorized. The last of these 14 was to be completed by 1907. In view of this condition, and to complete a fleet of 48 battleships by 1919, the General Board in paragraph 8 of its letter of October 17, 1903, recommended:

"8. To sum up, the General Board recommends that Congress be requested to authorize for the present a yearly building program, not limited by the amount appropriated last year, composed of the following ships: Two battleships, etc."

To this letter was appended a table, quoted below, showing what the condition of the Navy would be in battleships, year by year, to 1919, starting with the 10 completed and 14 already building or authorized, if the recommendation of the General Board for a two-battleship per year program from 1904 were followed.

Year.	Battleships.		Year.	Battleships.	
	Completed.	Authorized.		Completed.	Authorized.
1903	10	14	1912	34	2
1904	12	2	1913	36	2
1905	17	2	1914	38	2
1906	19	2	1915	40	2
1907	24	2	1916	42	.....
1908	26	2	1917	44	.....
1909	28	2	1918	46	.....
1910	30	2	1919	48	.....
1911	32	2			

7. It will be seen from the foregoing table that the General Board's recommendation provided for a *two-battleship program* consistently pursued from 1904 to 1915 to provide a fleet of 48 battleships by 1919. In these recommendations replacements were not considered, nor had limits of age been placed on battleships. The fundamental idea, however, was a two-battleship program to provide a fleet of 48 battleships by 1919. A larger program to hasten the completion of the fleet had been considered, but had been rejected because it was believed a fleet of 48 battleships by 1919 would answer all needs, in view of the known building programs of other countries.

8. In pursuance of this policy the General Board, as stated above, began its yearly recommendations by asking that two battleships be authorized in 1904. The following table shows the yearly programs recommended. The reasons for an increase over two battleships annually are given in succeeding paragraphs.

Year.	Battleships.		Year.	Battleships.	
	Recom- mended by General Board.	Authorized by Congress.		Recom- mended by General Board.	Authorized by Congress.
1904.....	2	1	1909.....	4	2
1905.....	3	2	1910.....	4	2
1906.....	3	1	1911.....	4	2
1907.....	2	1	1912.....	4	1
1908.....	4	2	1913.....	4	1

9. The recommendation for the laying down of two ships in 1904 failed of enactment, and only one was provided for, leaving the program for the creation of a 48-battleship fleet by 1919 one ship in arrears. To make this deficiency good, and maintain the general program, one additional ship, or three in all, were recommended for the 1905 program. Two were authorized, still leaving a deficiency of one for the two years, 1904 and 1905. To provide for this three were again recommended for the 1906 program. In 1908 and again in 1907 one ship only was authorized, leaving by 1908 the general program three ships in arrears. To begin making this deficiency good the General Board for the 1908 program recommended the authorization of four ships. From 1908 to 1911, inclusive, Congress followed the original program and provided for two battleships yearly. The accumulated shortage of three ships still remained, however, during these four years, and the General Board recommended year by year the laying down of four ships to begin making this good, since each succeeding year found the shortage still there.

10. In 1910 a new element entered, not considered in the original program. The fleet of 48 battleships contemplated in the program put forward in 1903, on a two-battleship per year building program, to be ready by 1919, contained all battleships then borne on the list, beginning with the *Indiana*. Experience had not yet in 1903 demonstrated the effective life of battleships, nor had any exhaustive study been made of it. Beginning with the program recommended for 1911 in General Board's letter No. 420-2 of May 24, 1910, this matter was seriously taken into consideration, since experience had shown that the three older battleships, the *Indiana*, *Massachusetts* and *Oregon*, then 20 years old from date of authorization, were approaching the limit of their effective life. Further studies from our own experience and from that of other navies, and from practice abroad convinced the General Board that the effective life of battleships is about 20 years from time of completion; and that hence, to maintain a fleet at a given strength, it is necessary to lay down a replacement ship 20 years from the time of the laying down of the original ship. Hence, replacement ships for the *Indiana*, *Oregon* and *Massachusetts* should have been laid down in 1910, for the *Iowa* in 1912, and new replacement ships should be begun for the *Kentucky* and *Kearsarge* in 1915. These matters, together with the shortage of three battleships already existing in 1911, were taken into consideration by the General Board in making its recommendations for a four-battleship program in both 1912 and 1913. One battleship only was authorized

in each of these two years, increasing the shortage in the original program to five, without considering replacement ships for the *Indiana*, *Oregon*, *Massachusetts* and *Iowa*, already overdue for authorization.

11. The preceding analysis shows clearly the error in the prevailing impression that the General Board has heretofore advocated a navy based on a continuous building program of four battleships a year, and proves that up to the present it has advocated continuously and consistently a program to produce a fleet of 48 battleships by 1919. This would have called for, considering replacements, a general two-battleship program with a third added every three years. The number of battleships called for by this policy, 48, and the date set for their completion, by 1919, were fixed by a calm and logical review of the policies and aims of the Nation and the known laws and prospective developments and aims of other countries; and the policy was to provide and maintain at all times *a fleet equal to or superior to that of any nation likely to challenge our policies.*

12. The 1903 program given in paragraph 6 of this letter, as modified by the replacement policy in 1910, called for at this date, November, 1914:

(a) Effective battleships completed and ready for service, less than 20 years old from completion-----	38
(b) Battleships under construction-----	7
(c) Battleships authorized in 1914-----	2
Total-----	47

13. The actual situation of the fleet as relates to battleships at this date, November, 1914, is as follows:

(a) Effective battleships completed and ready for service, less than 20 years old from completion (since the sale of the <i>Mississippi</i> and <i>Idaho</i>)--	30
(b) Battleships under construction-----	4
(c) Battleships authorized in 1914-----	2
(d) To replace <i>Mississippi</i> and <i>Idaho</i> -----	1
Total-----	37

14. This shows that we are now deficient 10 battleships, built, building, and authorized, from that contemplated in the 1903 program.

15. The General Board has made the foregoing brief analysis to set forth clearly the reasons for and meaning of all the recommendations it has made for battleship construction up to this time; and to show the conception under which the General Board has acted in the performance of its duty, under the Regulations, as the responsible advisers of the Secretary in all matters relating to the strength of the fleet, and the number and character of the units composing it. In the matter of battleships, the final result of all recommendations, and of all action taken thereon up to this date, has been to produce a completed battle line of 8 units less than the General Board believed to be safe, and with 2 units less under construction and authorized than was needed to continue the expansion of the fleet to the strength laid down in the policy.

16. The General Board believes the policy it has consistently advocated for the production of an adequate Navy is to the best interests of the country, and that any Navy less than adequate is an expense to the Nation without being a protection. It can not, therefore, too strongly urge the adoption by the Government of a policy looking to the making good of the deficiencies of the past, and the building up of this arm of the national defense until it becomes equal to the task that war will put upon it. That point will not be reached until the Navy is strong enough to meet on equal terms the strongest probable adversary.

17. The wisdom of such a policy is well illustrated by recent events, and is reinforced by the teachings of all history. For a review of the history of all ages will show that no nation has ever created and maintained a great over-sea commerce without the support of sea power. It will further show that trade rivalry, which is the active expression of the most universal of all human traits—desire for gain—has been a most fruitful cause of war; and, when the clash has come, the commerce of the weaker sea power has been broken up and driven from the seas. That has been true for all time, and is true to-day; and has a particular bearing on the United States at the present time, when such strenuous efforts are being made to build up a national merchant marine and extend our foreign commerce.

18. In the matter of national defense, history teaches still another great lesson particularly applicable to ourselves. That is, that a nation, insular in character or separated by bodies of water from other nations can and must rely on its Navy—when that Navy is adequate—for protection and freedom from invasion and may keep its own soil free from all wars other than civil. The United States is one among the few nations of the world that occupy this happy position, being insular in so far as any nation capable of making serious war upon us is concerned, since any opponent that need be considered must come to us from across the seas. Our main defense and protection from invasion must, therefore, always rest with the Navy, which must ever remain our first and best line of defense. This defense, unless adequate, is impotent; and, as before stated, adequacy is not reached until the Navy is strong enough to meet on equal terms the Navy of the strongest probable adversary.

19. In the matter of battleships the General Board remains of the opinion that it has always held, that command of the sea can only be gained and held by vessels that can take and keep the sea in all times and in all weathers and overcome the strongest enemy vessels that may be brought against them. Other types are valuable and have their particular uses, all of which are indispensable, but limited in character. But, what has been true throughout all naval wars of the past, and what is equally true to-day, is that the backbone of any navy that can command the sea consists of the strongest sea-going, sea-keeping ships of its day, or, of its battleships. The General Board recommends, therefore, in the light of all the information it has up to this present date that the development of the battleship fleet be continued as the primary aim in naval development, and that four (4) of them be authorized in the 1916 program.

DESTROYERS.

20. For the general purposes of war on the sea the General Board has placed the destroyer as the type of warship next in importance to the battleship, and has based the programs it has recommended on that idea. After very mature consideration of all the elements involved and a study of the results obtained from fleet maneuvers, the General Board came to the conclusion that a well-balanced fighting fleet, for all the purposes of offense and defense called for a relative proportion of four destroyers to one battleship. Hence, for every battleship built four destroyers should be provided. The General Board still holds this opinion and, therefore, recommends that sixteen (16) destroyers be provided in the 1916 program.

FLEET SUBMARINES.

21. For several years past all leading navies have been striving to perfect a submarine of an enlarged type with habitability, radius, and speed sufficient to enable it to accompany the fleet and act with it tactically, both in offense and

defense. Our designers and builders have been devoting their efforts to the same end and are now ready to guarantee such a type and one such vessel was provided for in the appropriation act of 1914. The great difficulty in the past in the production of this type has been the lack of a reliable internal combustion engine of the requisite power to give the necessary speed. This difficulty has been overcome, and the General Board is assured that engines have been designed and fully tested that will meet the requirements; and the builders stand ready to guarantee the results. The value of such a type in war for distant work with the fleet can hardly be overestimated, and the General Board recommends that three (3) be provided in the 1916 program. These with the one already authorized, will form a fleet submarine division of four for work with the fleet, and be the beginning of a powerful arm of the fleet.

COAST SUBMARINES.

22. For the submarine for coast defense and for occasional acting with the fleet in home waters, the General Board sees no necessity for boats of as great speed and size as the later designs, made before the sea-going submarine was believed to be in sight. In fact, any increase of size is detrimental, in that it increases draft and debars them from shallow waters; and any increase of speed in this class of submarines is not needed, and is gained at the expense of other desirable qualities. Between the coast-defense submarine and the submarine of sufficient size, radius, habitability, and surface speed to accompany and act with the fleet tactically, the General Board sees no necessity in naval warfare for an intermediate type. It is therefore recommended that the submarines for the coast work be of the general characteristics already prescribed in General Board letter No. 420-15, of June 10, 1914, and that sixteen (16) of these be provided for in the 1916 program.

SCOUT CRUISERS.

23. In the struggle to build up the purely distinctive fighting ships of the Navy—battleships, destroyers and submarines—the cruising and scouting element of the fleet has been neglected in recent years, and no cruisers or scouts have been provided for since 1904, when the *Montana*, *North Carolina*, *Birmingham*, *Chester* and *Salem* were authorized. This leaves the fleet peculiarly lacking in this element so necessary for information in a naval campaign, and of such great value in clearing the sea of torpedo and mining craft, in opening and protecting routes of trade for our own commerce, and in closing and prohibiting such routes to the commerce of the enemy. The General Board believes that this branch of the fleet has been too long neglected and recommends that the construction of this important and necessary type be resumed. For the 1916 program it is recommended that four (4) scout cruisers be provided.

AIR CRAFT.

24. The General Board in its endorsement No. 449 of August 30, 1913, and accompanying memorandum brought to the attention of the department the dangerous situation of the country in the lack of air craft and air men in both the naval and military services. A résumé was given in that endorsement with the accompanying memorandum of conditions in the leading countries abroad at that date, showing the preparations being made for air warfare and the use of air craft by both armies and navies, and contrasting their activity with our own inactivity. Certain recommendations were made in the same endorsement looking to the beginning of the establishment of a proper air service for the Navy.

25. The total result of that effort was the appointment of a board on aeronautics October 9, 1913. That board made further recommendations, among them the establishment of an aeronautic school and station at Pensacola and the purchase of 50 aeroplanes, 1 fleet dirigible, and 2 small dirigibles for training. At the present time, more than a year later, the total number of air craft of any kind owned by the Navy consists of 12 aeroplanes, not more than two of which are of the same type, and all reported to have too little speed and carrying capacity for service work.

26. In view of the advance that has been made in aeronautics during the past year, and the demonstration now being made of the vital importance of a proper air service to both land and sea warfare, our present situation can be described as nothing less than deplorable. As now developed air craft are the eyes of both armies and navies, and it is difficult to place any limit to their offensive possibilities.

27. In our present condition of unpreparedness, in contact with any foe possessing a proper air service, our scouting would be blind. We would be without the means of detecting the presence of submarines or mine fields or of attempting direct attack on the enemy from the air, while our own movements would be an open book to him. The General Board can not too strongly urge that the department's most serious thought be given to this matter, and that immediate steps be taken to remedy it, and recommends that Congress be asked for an appropriation of at least \$5,000,000, to be made available immediately, for the purpose of establishing an efficient air service.

GUNBOATS.

28. The Navy is very deficient in gunboats. Though the Navy list gives 30 names under "gunboats," only a very limited number of these 30 are in a condition to be available for general service. Some, like the *Villalobos*, *Callao*, *Samar*, *Sandoval*, etc., are old boats of little value taken over from Spain, of from 400 to 250 tons and less. Of the others, with the exception of the light-draft river gunboats *Monocacy* and *Palos*, and the *Sacramento*, no gunboats have been authorized since 1902. Seven are at present assigned to Naval Militia duty, and three others have been recently withdrawn from that service because of the crying need for more gunboats for general duty. Those remaining on the list serviceable and fit for general duty are so limited in number that it has been necessary in recent years to detail battleships, large cruisers, and destroyers to do gunboat duty. This has been markedly demonstrated during the past year on the Mexican coast. It would seem superfluous to point out the harmful influence this has on the efficiency and training of the fleet for war, and the General Board advises strongly against such practice whenever it can be possibly avoided. It is therefore recommended that a beginning be made to replace the old and worn-out gunboats, that there may be sufficient of them to do the police and general diplomatic duties required of such vessels in time of peace without disrupting the battle fleet. To this end it is recommended that four (4) be authorized in the 1916 program. With the exception of the *Sacramento*, authorized in 1911, no seagoing gunboat has been authorized since 1902.

AUXILIARIES.

FUEL SHIPS.

29. In the matter of auxiliaries needed for the fleet the General Board is of the opinion that the most serious situation exists in the matter of fuel-oil supply, and that provision for oil-fuel ships should be given first consideration.

This is serious from the point of view of economy in time of peace, and would be disastrous in the event of hostilities arising. We have 41 oil-burning destroyers built or building, to be followed by others, 8 ships of the dreadnaught type using oil as an auxiliary fuel, and in 1915 the two first all-oil-fuel battleships will be added to the fleet, to be followed by others. To supply this oil-burning fleet with fuel the Navy possesses the *Arethusa*, an old tank ship of 3,629 tons capacity and not more than 10 knots speed, and seven fleet colliers fitted to carry some fuel oil in addition. The total oil capacity is 23,728 tons, 3,629 tons of which—that in the *Arethusa*—could not accompany the fleet; so that the present available oil supply that could accompany the fleet is 20,109 tons. Logistic studies show that to maintain our present oil-burning fleet in active service across the ocean requires the delivery of about 23,000 tons of fuel oil per month. To maintain this supply we have the seven colliers mentioned above capable of delivering an average of about 10,000 tons per month. This situation will be very much aggravated on the addition to the fleet of the two all-oil-burning battleships, *Oklahoma* and *Nevada*, and the other destroyers now under construction. Nor can commercial oil carriers be relied upon to remedy this deficiency, since ocean tankage both at home and abroad is not yet adequate to meet the demands of commerce and industry.

30. To partially meet this situation two oil-fuel ships of a combined cargo capacity of 15,108 tons were authorized in August, 1912. On November 1, 1914, one of these ships was only 82.4 per cent completed and the other only 57.2 per cent completed.

31. To remedy this serious defect in our preparedness for war the General Board recommended the construction of two (2) oil-fuel ships in the 1915 program. These were not authorized and the General Board therefore emphatically repeats this recommendation for the 1916 program, and further recommends that the construction of the two ships authorized in August, 1912, more than two years ago, be hastened with all possible speed.

DESTROYER TENDERS AND SUBMARINE TENDERS.

32. The auxiliaries of next importance to the fleet at the present time, after the oil fuel ships, are destroyer tenders and submarine tenders. Of the three improvised vessels used as destroyer tenders the *Iris*, built in 1885, is past her period of usefulness and should be replaced. The General Board recommended one (1) destroyer tender in the 1915 program. This was not authorized, and the recommendation is repeated for the 1916 program.

33. Of the six vessels used as submarine tenders, all are of the improvised variety, and none is well fitted for the service. Three of them are old monitors, two of them old gunboats, and one the old sailing ship *Severn*. To begin replacing these, one submarine tender was authorized in 1911, another in 1912, and one (1) was recommended in 1913 for the 1915 program. This last was not authorized, and this recommendation is repeated for the 1916 program.

TRANSPORTS.

34. The General Board has from time to time, in numerous letters extending over a series of years, called the attention of the department to the inadequacy of preparation in the Navy for advanced base work and to the vital importance of this work to success in war. The prerequisite for any advanced base work is the necessary means for transportation of the personnel and material of the advanced base outfit; and for this reason the General Board has recommended the construction of the two transports needed for the purpose—ships of the size and speed necessary and especially designed for what they were intended to

accomplish. Their primary use was to be for war, but secondarily they could be used in general transportation service at all times. Not one of the four improvised transports now in service in the Navy—the *Hancock*, *Rainbow*, *Prairie* and *Buffalo*—is of the size, or is fitted, for the work required, nor of the character of construction needed for safety in ships carrying large bodies of men. All are old single-skin ships without proper water-tight subdivision. Of the two transports needed, one was authorized in 1913, and the other recommended in the 1915 program. This was not authorized, and the General Board repeats this recommendation for the 1916 program.

HOSPITAL SHIP.

35. The General Board in making the foregoing recommendations has given preference to what is needed for the fighting efficiency of the fleet over all other matters. Two other types of auxiliaries, however, are required for the successful administration of the fleet—hospital and supply ships.

36. The two hospital ships now borne on the Navy list—the *Solace* and the *Relief*—are both improvised and small, and neither adapted to the service. They have done good service in time of peace in connection with subdivisions of the fleet, but the *Relief* is now unseaworthy and the *Solace* would be of limited value in time of war. To remedy this defect, the General Board recommended the construction of one (1) hospital ship in the 1915 program. This was not authorized, and the General Board repeats this recommendation for the 1916 program.

SUPPLY SHIPS.

37. Of the four ships borne on the Navy list as supply ships, all are improvised and were hurriedly bought and fitted in 1898 to meet the exigencies of the Spanish War. The *Supply* is already beyond her period of usefulness, and has been discarded as a supply ship. The *Culgoa* is approaching her limit of usefulness. The *Celtic* and *Glacier*, while old and inadequately fitted, are still good for some years service. One new ship was authorized in 1913. Another is needed, and to meet this situation the General Board recommended the construction of one (1) supply ship in the 1915 program. This was not authorized, and the General Board repeats this recommendation for the 1916 program.

SUMMARY.

38. To summarize, the General Board recommends for the 1916 program—

- 4 battleships.
- 16 destroyers.
- 3 fleet submarines.
- 16 coast submarines.
- 4 scouts.
- 4 gunboats.
- 2 oil-fuel ships.
- 1 destroyer tender.
- 1 submarine tender.
- 1 Navy transport.
- 1 hospital ship.
- 1 supply ship.
- Air service—\$5,000,000.

PERSONNEL.

39. The General Board can not too strongly urge upon the department the necessity of using its best endeavors to carry out the repeated recommendations of the General Board, made from year to year, to provide the fleet with a personnel, active list and trained reserve, equal to the manning of the fleet for war.

40. In the opinion of the General Board this is a matter of even more serious import than that of construction, for it can not be too often repeated that ships without a *trained* personnel to man and fight them are useless for the purposes of war. The training needed for the purpose is long and arduous, and can not be done after the outbreak of war. This must have been provided for long previous to the beginning of hostilities; and any ship of the fleet found at the outbreak of war without provision having been made for its manning by officers and men trained for service can be counted as only a useless mass of steel whose existence leads only to a false sense of security.

41. The strength of fleets is measured too often in the public mind by the number and tonnage of its material units. The real strength of a fleet is a combination of its personnel—with their skill and training—and its material; and of these two elements the more important—the personnel—is too often forgotten and neglected in making provision for our fleet. The General Board can not impress this point too strongly on the department or recommend too earnestly that every effort be made to correct it, and that legislation be urged to provide for a personnel on the active list, supplemented by a trained reserve, sufficient to man every vessel of the fleet when the call comes.

42. No nation in time of peace keeps all the ships of its Navy fully manned and in full commission. But all leading nations except ourselves provide an active list, officers and men, sufficient to keep the best of their fleet in full commission and all the serviceable ships of their fleet in a material condition for war; *and in addition a trained reserve of officers and men* sufficient to complete the complements and fully man every serviceable ship of their navies, and furnish a reserve for casualties. Thus, every nation with which conflict is possible is prepared to mobilize its entire navy, by order, with officers and men trained for the service. We alone of the naval powers provide no such reserves, and an active personnel too scant, and trust to the filling of the complements of our ships by untrained men recruited after war is imminent or declared. To quickly man all of the ships of the Navy serviceable for war (including ships which are now in reserve or ordinary) with trained crews is impossible owing to the absence of a trained reserve.

43. In view of all that has been herein set forth, the General Board recommends:

(a) That legislation be asked for providing an active personnel, officers and enlisted force, capable of keeping in full commission all battleships under 15 years of age from date of authorization, all destroyers and submarines under 12 years of age from authorization, half of the cruisers and all gunboats, and all the necessary auxiliaries that go with the active fleet; and of furnishing nucleus crews for all ships in the Navy that would be used in time of war, and the necessary men for the training and other shore stations.

(b) That the general policy be adopted of expanding the active personnel with the expansion of the fleet in the proportions indicated in (a)

(c) That immediate steps be taken to form a national naval reserve of trained officers and men, and that this work be pushed until this reserve in connection with the Naval Militia has reached the point where, combined with the active list, it will be possible to fully man the entire fleet with war complements and furnish 10 per cent additional for casualties.

(d) That the Naval Militia be expanded in number and that the department encourage the continuance and improvement of its training to the end that it may still more efficiently serve to reenforce the regular service at need.

GEORGE DEWEY.

APPENDIX B.

DISTRIBUTION OF PERSONNEL.

WASHINGTON, *November 18, 1914.*

From: The Secretary of the Navy.

To: The Bureau of Navigation, Navy Department.

Subject: Increase of the Navy; Building program and personnel, 1916.

Reference: General Board's letter No. 420-2 of November 17, 1914.

In its report on personnel, in section 43, paragraph (a), the General Board makes the following recommendation:

"That legislation be asked for providing an active personnel, officers and enlisted force, capable of keeping in full commission all battleships under 15 years of age from date of authorization, all destroyers and submarines under 12 years of age from authorization, half of the cruisers and all gunboats, and all the necessary auxiliaries that go with the active fleet; and of furnishing nucleus crews for all ships in the Navy that would be used in time of war, and the necessary men for the training and other shore stations."

The department desires a report from the bureau as to personnel available for carrying out the recommendations of the General Board above quoted, together with such comment and recommendation on the subject as the bureau sees fit to make.

JOSEPHUS DANIELS.

NAVY DEPARTMENT,

BUREAU OF NAVIGATION,

Washington, D. C., November 19, 1914.

From: Chief of Bureau of Navigation.

To: The Secretary of the Navy.

Subject: Increase of Navy, etc.

Reference: Department's letter, etc., quoting recommendations of General Board.

1. The bureau has carefully considered the subject of personnel in connection with the General Board's recommendations regarding the organization of the fleet as expressed in section 43, paragraph (a), of the above reference, and respectfully submits as follows the requirements in personnel to put into effect the General Board's recommendation:

CLASS A.—Active fleet to be in full commission at all times in training for war.

	Number of ships.	Line officers.	Enlisted men.
Battleships.....	21	630	17,426
Destroyers.....	35	140	2,274
Destroyer tenders.....	3	14	638
Submarines.....	28	56	530
Submarine tenders.....	6	24	900
Armored cruisers.....	5	150	4,015
Cruisers.....	11	117	3,403
Transports.....	2	12	300
Supply ships.....	3	12	450
Repair ships.....	2	14	400
Ammunition ship.....	1	4	55
Mine depot ships.....	2	18	504
Fleet tugs.....	6	0	180
Hospital ship.....	1	0	55
Total.....	126	1,191	31,348

CLASS B.—Gunboats that may be serviceable for cruising, patrol, and other duties in time of peace.

	Number of ships.	Line officers.	Enlisted men.
Gunboats.....	27	133	3,015
Total for classes A and B (all vessels in full commission).....	153	1,324	34,363

CLASS C.—Vessels of more or less military value to be held in reserve with nucleus crews in time of peace and to be placed in full commission in time of war.

	Number of ships.	Line officers.	Enlisted men.
Battleships.....	8	40	1,680
Armored cruisers.....	5	25	1,250
Old destroyers.....	16	82	820
Old torpedo boats.....	12	12	120
Old submarines.....	7	7	70
Cruisers.....	10	20	780
Old battleships (ordinary).....	4	8	240
Old monitors (ordinary).....	3	3	180
Total.....	65	147	4,500
Class A—Battle fleet.....	126	1,191	31,348
Class B—Gunboats.....	27	133	3,015
Total.....	218	1,471	38,953
Flag officers, flotilla commanders, staffs, etc.....		50	
Total line officers.....		1,521	

NOTE.—The above figures show the personnel required for all vessels on the Navy list not in possession of the Naval Militia which, in the opinion of the bureau, may be of possible service in time of peace or war. It will be noted that a number of the vessels in classes B and C are of doubtful value either in peace or war, owing to their age and material condition. However, the bureau has provided personnel for them.

CLASS D.—*Personnel required to full commission all vessels of class C which are held in reserve with nucleus crews in time of peace.*

	Number of ships.	Line officers.	Enlisted men.
Battlehips.....	8	160	3,514
Armored cruisers.....	5	125	2,765
Old destroyers.....	16	32	864
Old torpedo boats.....	12	24	240
Submarines.....	7	0	0
Old battlehips.....	4	60	2,184
Cruisers.....	10	90	3,691
Old monitors.....	3	21	420
Total.....	65	512	13,678
Total required in classes A, B, and C.....		1,521	38,953
Grand total.....	218	2,033	52,631
Now in service.....		1,872	52,293
Apparent shortage for war.....		161	338

While the apparent shortage to commission all serviceable vessels for war is only 161 officers and 338 men, it is borne in mind that there are many duties required of both officers and men ashore in time of war which must be provided for from the active personnel in order that the efficiency and effectiveness of the fleet may be maintained.

In regard to officers, the great majority of those now on shore duty would be relieved by retired officers and sent to sea upon the outbreak of war. The bureau has carefully considered the requirements in this particular and believes that a minimum of 160 active line officers should remain ashore in time of war, otherwise the organization would be so disrupted that the efficiency of the fleet would be seriously impaired. In this connection attention is invited to the fact that 133 officers and 3,015 enlisted men have been assigned to gunboats primarily for peace duties. There is no doubt that in time of war these vessels, or many of them, would either be interned in foreign ports or brought home for service on the coast patrol, and manned by the naval militia or other reserve forces. This would release their personnel for service with the fighting fleet.

Assuming that two-thirds of the personnel of gunboats were so released, there would in this way become available 90 officers and 2,000 enlisted men.

There are at present serving on surveying ships and on fish commission ships 28 officers and 622 enlisted men. These would also become available for the fleet in time of war, making 90 plus 28 equals 118 officers and 2,000 plus 622 equals 2,622 enlisted men.

The bureau is therefore of the opinion that there exists at the present time a shortage of 161 plus 160 minus 118 equals 203 line officers required to place in full commission all vessels of the Navy serviceable for war purposes.

In estimating the shortage of enlisted men, consideration must be given to the requirements of the service in connection with training stations, tugs, station ships, recruiting, etc., as given in the table below, showing the present distribution of the enlisted personnel in duties other than at sea with the fleet, class E.

CLASS E.

	Men.
1. 40 navy-yard tugs.....	619
2. Caring for Naval Militia ships.....	108
3. Station ships, yard craft, etc.....	848
4. Training stations and trade schools.....	4,075
5. Recruiting stations.....	375
6. Radio stations.....	258
7. Ships building.....	111
8. Navy yards and shore stations.....	880
9. Insular force.....	356
10. General detail.....	750
11. Prisoners, leave, traveling, etc.....	2,752
12. Hospitals.....	1,388
	<hr/> 12,518

In case of war the following numbers can be drawn on from the above and sent to sea:

From item 2.....	108
From item 3.....	300
From item 4.....	3,000
From item 7.....	111
From item 8.....	400
From item 10.....	750
From item 11.....	1,000
	<hr/> 5,669

Remaining ashore in time of war, 12,518 minus 5,669 equals 6,849 unavailable for sea duty. To this must be added the apparent shortage of enlisted men shown above as 338, making a further apparent shortage of 7,187, from which should be subtracted 2,622, the number gained from gunboats and from surveying and fish commission vessels, making an actual shortage of men to man all vessels serviceable for war purposes of 4,565.

From the foregoing figures the bureau concludes that for purposes of placing in full commission all vessels of the Navy serviceable for war purposes at the present there is a shortage of 203 line officers and 4,565 enlisted men.

Probable requirements for commissioning new ships within the next year—

	Men.
2 battleships.....	1,500
6 destroyers.....	450
10 submarines.....	200
1 destroyer tender.....	250
2 submarine tenders.....	300
	<hr/> 2,700

Total.....

Available during next year to commission new ships—

	Men.
From general detail.....	750
From ships building.....	111
Available for enlistment to fill average authorized quota.....	758
	<hr/> 1,614
Required for new ships next year.....	2,700
	<hr/> 1,086

Shortage.....

Carrying out the plan of retaining in full commission the 21 latest battleships and of maintaining a sufficient number of submarine tenders—

	Men.
2 battleships (<i>Virginia</i> class) would be placed in reserve, thus gaining---	1,170
2 submarine tenders out of commission, to gain-----	300
Gain-----	1,470
Shortage-----	1,086

Surplus after commissioning all new construction next year----- 384

After due consideration of the foregoing figures the bureau sees no necessity for asking for an increase of enlisted personnel this year, but believes that it will be necessary to do so next year if the recommendation of the General Board is approved. The question of the shortage of officers is much more urgent than that of enlisted men, as a sufficient number of ex-service men to fill vacancies in war complements can be readily obtained on the outbreak of war. But as the supply of officers is limited to the output from the Naval Academy it will necessarily be several years before the needs of the service in this respect can be filled if all vessels of the Navy serviceable for war purposes are placed in full commission.

No estimate is made for colliers, as existing law contemplates manning these vessels from other sources than the enlisted personnel of the Navy.

The bureau believes that a naval reserve organized from the honorably discharged enlisted men now in civil life should be created within the next year.

Subject to the foregoing remarks the bureau concurs in the recommendations of the General Board quoted in the department's letter and believes that the policy recommended would increase the efficiency of the Navy to a maximum not only in material but in the distribution of the personnel to the best advantage.

VICTOR BLUE.

APPENDIX C.

LIST OF OFFICERS AND MEN WHO WERE MENTIONED FOR HEROISM AND BRAVERY AT VERA CRUZ.

Rear Admiral F. F. Fletcher, United States Navy.
Capt. W. B. Rush, United States Navy.
Capt. H. M. P. Huse, United States Navy.
Capt. E. A. Anderson, United States Navy.
Commander H. O. Stickney, United States Navy.
Commander W. K. Harrison, United States Navy.
Commander W. A. Moffett, United States Navy.
Lieut. Commander R. Z. Johnston, United States Navy.
Lieut. Commander H. E. Yarnell, United States Navy.
Lieut. Commander A. Buchanan, United States Navy.
Lieut. Commander A. B. Keating, United States Navy.
Lieut. G. W. S. Castle, United States Navy.
Lieut. J. P. Lannon, United States Navy.
Lieut. R. Wainwright, jr., United States Navy.
Lieut. A. Staton, United States Navy.
Lieut. J. C. Townsend, United States Navy.
Lieut. F. V. McNair, United States Navy.
Lieut. J. Grady, United States Navy.
Lieut. I. C. Johnson, jr., United States Navy.
Lieut. F. J. Fletcher, United States Navy.
Lieut. C. C. Hartigan, United States Navy.
Lieut. G. M. Courts, United States Navy.
Lieut. (Junior Grade) J. H. Ingram, United States Navy.
Ensign T. S. Wilkinson, jr., United States Navy.
Ensign L. S. Davidson, United States Navy.
Ensign G. M. Lowry, United States Navy.
Ensign O. C. Badger, United States Navy.
Ensign P. F. Foster, United States Navy.
Ensign E. O. McDonnell, United States Navy.
Ensign E. Buckmaster, United States Navy.
Ensign H. C. Frazer, United States Navy.
Ensign D. R. Lee, United States Navy.
Surg. M. S. Elliott, United States Navy.
Surg. C. D. Langhorne, United States Navy.
Chief Boatswain J. McCloy, United States Navy.
Lieut. Col. W. C. Neville, United States Marine Corps.
Maj. A. W. Catlin, United States Marine Corps.
Maj. S. D. Butler, United States Marine Corps.

Maj. G. C. Reid, United States Marine Corps.
Maj. R. C. Berkeley, United States Marine Corps.
Capt. F. H. Delano, United States Marine Corps.
Capt. J. C. Breckinridge, United States Marine Corps.
Capt. W. C. Harlee, United States Marine Corps.
Capt. E. T. Fryer, United States Marine Corps.
Capt. J. A. Hughes, United States Marine Corps.
Capt. J. R. Horton, United States Marine Corps.
Capt. J. F. Dyer, United States Marine Corps.
Capt. W. N. Hill, United States Marine Corps.
Niels Drustrup, chief turret captain.
Walter B. Weeks, ordinary seaman.
George Berton, boatswain's mate, second class.
Farrell N. C. Overall, boatswain's mate, first class.
Frederick E. Norman, coxswain.
James J. Dermody, boatswain's mate, second class.
George J. Smith, fireman, second class.
Arthur J. Fogarty, seaman.
Harry D. Shipman, coal passer.
William J. Glynn, seaman.
John Neukom, seaman.
James A. Duryea, seaman.
Charles D. Cameron, ordinary seaman.
Robert Semple, chief turret captain.
George E. Bancroft, seaman.
Benjamin W. Claggett, hospital apprentice, first class.
Harry Smith, boatswain's mate, first class.
Roy Holloway, gunner's mate, first class.
Paul W. Green, gunner's mate, third class.
Fred E. Jorgensen, seaman.
George E. Bent, boatswain's mate, first class.
Walter E. Stevens, seaman.
William J. Genereux, coxswain.
Joseph Mueller, coxswain.
Frank F. Smalley, coxswain.
Samuel D. Barr, chief yeoman.
Gustave Brodbeck, chief gunner's mate.
Clarence R. Harshbarger, seaman.
Frederick Nanz, ordinary seaman.
Elmer Van Camp, fireman, first class.
Robert M. Ash, fireman, first class.
John B. MacDonald, fireman, first class.
Augustin O'Neill, chief boatswain's mate.
Herman H. Roloff, coxswain.
John J. McLaughlin, boatswain's mate, second class.
Robert A. England, seaman.
Edwin C. Wertman, gunner's mate, first class.
John H. Hendrickson, hospital apprentice, first class.
James A. Anderson, coxswain.
Robert G. Hart, ordinary seaman.
John W. Hawkins, ordinary seaman.
Edwin J. Cantwell, seaman.
Solomon Clay, ordinary seaman.
Daniel J. Reilly, boatswain's mate, second class.

George Bradley, chief gunner's mate.
 James P. Cush, boatswain's mate, first class.
 Emil Tyburec, ordinary seaman.
 Joseph H. Risacher, boatswain's mate, second class.
 Johan Scession, gunner's mate, first class.
 First Sergt. Fay, United States Marine Corps.
 Sergt. Miller, United States Marine Corps.
 Corpl. Edwards, United States Marine Corps.
 Pvt. Liddick, United States Marine Corps.
 Pvt. Cohen, United States Marine Corps.
 Pvt. Mahr, United States Marine Corps.

LIST OF OFFICERS AND MEN WHO HAVE RECEIVED COMMENDATORY LETTERS DURING THE PAST YEAR FOR VARIOUS ACTS OF HEROISM AND BRAVERY (OTHER THAN AT VERA CRUZ).

Lieut. Commander Leigh C. Palmer, United States Navy.
 Lieut. Commander Walter B. Tardy, United States Navy.
 Lieut. Arthur L. Bristol, United States Navy.
 Lieut. (Junior Grade) Archibald D. Turnbull, United States Navy.
 Lieut. (Junior Grade) Charles H. Maddox, United States Navy.
 Lieut. (Junior Grade) Zachary Lansdowne, United States Navy.
 Ensign Pat Buchanan, United States Navy.
 Ensign Richard P. Myers, United States Navy.
 Ensign Richard E. Byrd, jr., United States Navy.
 Ensign Charles W. McNair, United States Navy.
 Acting Asst. Dental Surg. Joseph D. Halleck, United States Navy.
 Naval Constructor Richard D. Gatewood, United States Navy.
 Naval Constructor Paul H. Fretz, United States Navy.
 Chief Boatswain Thomas M. Cassidy, United States Navy.
 Boatswain William T. Shaw, United States Navy.
 Gunner Arthure Langfield, United States Navy.
 Chief Machinist John I. Ballinger, United States Navy.
 Chief Carpenter Elvie L. Kempton, United States Navy.

ENLISTED MEN FOR RESCUING PERSONS FROM DROWNING.

Samuel A. A. Gottlieb, musician, second class.
 Henry E. Blase, coxswain.
 Richard E. Arnold, ordinary seaman.
 Martin J. Halvey, seaman.
 E. H. Smith, machinist's mate, second class.
 T. J. Glavin, quartermaster, first class.
 W. R. D. Proffitt, hospital steward.
 T. Collins, seaman.
 A. E. Heida, seaman.
 Otto Huthansel, boatswain's mate, first class.
 William J. Clerpiasz, seaman.
 Harry Crooks, ordinary seaman.
 John J. Loftus, coal passer.
 Lawrence J. Murphy, chief machinist's mate.
 Wendell A. Williams, coxswain.
 Jerry Sprague, coxswain.

James M. Butler, fireman, second class.
John M. Keane, ordinary seaman.
Oscar B. Peterson, oiler.
Charles Zebley, seaman.
Albert D. Russell, fireman, second class.
John P. Willson, seaman.
Roy H. Claunch, coal passer.
Robert W. Stuart, boatswain's mate, second class.
Driss Benane, chief commissary steward.
Charles Shocklin, gunner's mate, second class.
John H. Irving, ordinary seaman.
John N. Carbray, shipwright.
T. F. Donoghue, fireman, first class.
G. E. Baker, ordinary seaman.
Robert P. Kenthly, seaman.
John M. Dunn, seaman.
George G. Harker, ordinary seaman.
F. C. Whelahan, gunner's mate, first class.
Henry M. Reynolds, coxswain.
Del L. Young, coxswain.
Charlie B. Dilbeck, master-at-arms, third class.
Robert T. Northcutt, hospital steward.
William J. Donohue, fireman, first class.
Frank Duenser, fireman, first class.
Walter L. Cleland, seaman.
Paul R. Hoover, ordinary seaman.
Patrick J. O'Connor, chief water tender.
William P. Alexander, sailmaker's mate.
Joseph L. Crouch, coxswain.
John Bertalovich, seaman.
Howard Reid, seaman.
Raymond A. Hodge, coxswain.
Charles Wright, seaman.
George R. Teufel, ordinary seaman.
Harry Waffle, quartermaster, third class.
Frederick J. Funch, ship fitter, second class.
Karl M. Asmann, hospital apprentice, first class.
James J. Dillon, apprentice seaman.
James P. Rush, fireman, first class.
Benjamin L. Kruser, seaman.
Cleve B. Farran, boilermaker.
R. C. Hawkins, master-at-arms, third class.
H. S. Alderman, hospital apprentice.

BRAVERY IN ENGINE ROOM FOLLOWING A COLLISION AND EXPLOSION IN BOILER ROOM.

Robert C. McClure, chief machinist's mate.
Eggale Goegalas, water tender.
Frederick T. Wilson, chief water tender.
George J. McKee, water tender.
John Stover, chief water tender.
Henry J. Boehme, oiler.
William H. Edwards, fireman, second class.
Daniel B. Smith, water tender.

GOING INTO THE HOLD OF A VESSEL FILLED WITH POISONOUS GASES TO RESCUE
SHIPMATES.

W. H. Stanley, seaman.
W. F. Anding, ordinary seaman.
Stephen Frederick Leitner, boatswain's mate, second class.
Horace C. Ferguson, ordinary seaman.
C. E. Curtis, ordinary seaman.
Bevely F. Sales, ordinary seaman.
Edward R. Simpson, ordinary seaman.
W. F. Ahrens, coxswain.

EXTRAORDINARY WORK IN BUILDING A TRAIL IN ALASKA TO BRING COAL TO THE COAST.

Roy Alkman, hospital steward.
George Polsson, blacksmith.

BRAVERY IN RAILROAD COLLISION.

Arthur J. Hill, oller.

DISARMING AN INSANE MAN.

Gustav Amling, master-at-arms, first class.

CARRYING A LINE THROUGH THE SURF TO SAVE A LAUNCH.

Frank William Heins, chief boatswain's mate.

RESCUING AN INSANE MAN WHO HAD CLIMBED OUT ON THE YARDARM OF THE
MAINMAST.

Morris E. Wallace, master-at-arms, second class.
William E. Carley, boatswain's mate, second class.

LIFE-SAVING MEDALS AWARDED.

Sergt. Harry W. Miller.
Thomas J. Glavin, quartermaster, first class.
Erle H. Smith, machinist's mate, second class.
Robert P. Keathly, seaman.
Charles Schocklin, gunner's mate, second class.
John H. Irving, coxswain.
John M. Dunn, seaman.

These medals were awarded by the Secretary of the Treasury to the above-named men for having endangered their lives in saving or endeavoring to save lives from the perils of the sea.

Statement of sales of charts and Hydrographic Office publications and condemned property sold by the Navy Department during the fiscal year ended June 30, 1914.

	Sold to—	Gross amount received.	Expenses of sale.	Net proceeds.
Charts and Hydrographic Office publications		\$6,427.56	\$6,427.56
Typewriters (6).....	Underwood Type-writer Co.	175.00	175.00
Old furniture, carpets, etc., belonging to bureaus and offices, Navy Department.	696.99	\$7.35	689.64
Total.....	7,299.55	7.35	7,292.20

Deposited to credit:

Miscellaneous receipts, proceeds of sale.....	\$864.64
Contingent and miscellaneous expenses, Hydrographic Office, 1914.....	6,427.56
Total.....	7,292.20

The statement of sales of condemned naval vessels appears in the report of the Paymaster General, United States Navy.

The "Movements of vessels" is printed as a separate pamphlet.

COMPARATIVE STATEMENT OF ESTIMATES AND APPROPRIATIONS, 1915-16, NAVY DEPARTMENT.

Naval Establishment.	Appropriated, 1915.	Estimates, 1916.	Increase of estimates for 1916 over amount appro- priated for 1915 for same pur- pose.	Decrease of estimates for 1916 as com- pared with amount appro- priated for 1915 for same pur- pose.	New items, 1916.
Pay, miscellaneous.....	\$1,000,000.00	\$1,000,000.00			
Contingent, Navy.....	150,000.00	46,000.00		\$104,000.00	
Care of lepers, islands of Guam and Cullon.....	14,000.00	14,000.00			
Bureau of Navigation:					
Transportation.....	850,000.00	750,000.00		100,000.00	
Recruiting.....	130,000.00	130,000.00			
Contingent.....	15,000.00	10,000.00		5,000.00	
Gunnery exercises.....	115,000.00	99,900.00		15,200.00	
Steaming experiments.....	6,500.00	1,500.00		5,000.00	
Aviation experiments.....	10,000.00			10,000.00	
Outfits on first enlistment.....	800,000.00	750,000.00		50,000.00	
Maintenance of naval auxiliaries.....	800,000.00	800,000.00			
Instruments and supplies.....	305,000.00	277,000.00		28,000.00	
Ocean and lake surveys.....	90,000.00	80,000.00		10,000.00	
Naval training station, California.....	70,000.00	70,000.00			
Naval training station, Rhode Island.....	85,000.00	85,000.00			
Naval training station, Great Lakes.....	98,457.00	80,000.00		18,457.00	
Naval training station, St. Helena.....	25,000.00	25,000.00			
Naval War College, Rhode Island—					
Maintenance.....	25,250.00	25,250.00			
Services of a lecturer on international law.....	2,000.00	2,000.00			
Services of civilian lecturers.....	300.00	300.00			
Care and preservation of the library, including the purchase, binding, and repair of books of reference and periodicals.....	1,300.00	1,300.00			
Total.....	3,428,807.00	3,187,150.00		241,657.00	
Naval Home, Philadelphia, Pa. (paid from interest on Navy pension fund)—					
Pay of employees.....	22,684.00	22,684.00			
Maintenance.....	54,421.00	54,421.00			
Total.....	77,117.00	77,117.00			

Comparative statement of estimates and appropriations, 1915-16, Navy Department—Continued.

Naval Establishment	Appropriated, 1915.	Estimates, 1916.	Increase of estimates for 1916 over amount appro- priated for 1915 for same pur- pose.	Decrease of estimates for 1916 as com- pared with amount appro- priated for 1915 for same pur- pose.	New items, 1916.
Bureau of Ordnance:					
Ordnance and ordnance stores—					
Procuring, producing, preserving, and handling ordnance material, etc.	\$5,800,000.00	\$5,795,420.00		\$4,580.00	
Purchase and manufacture of smokeless powder.	1,150,000.00	1,150,000.00			
Naval Gun Factory, Washington, D. C.: New and improved machinery.	76,000.00	76,000.00			
Naval Proving Ground, Indian Head, Md.: Machinery for extension of powder factory.		141,620.00	\$141,620.00		\$141,620.00
New batteries for ships of the Navy—					
For modifying or renewing breech mechanisms of 3, 4, 5, and 6 inch guns.	75,000.00			75,000.00	
Replacing Mark VI, 6-inch, with Mark VIII guns.	150,000.00			150,000.00	
Liners for eroded guns.	100,000.00				
Modifying 5-inch 50-caliber Mark V guns.	65,000.00				
Armament for ships of the Navy.	3,178,800.00	2,782,535.00		65,000.00	
Torpedoes and appliances.	1,000,000.00	1,000,000.00		398,355.00	
Torpedo Station, Newport, R. I.—					
Maintenance, etc.	80,000.00	80,000.00			
New machinery and tools for torpedo factory.	15,000.00	30,000.00	15,000.00		
Experiments.	150,000.00	100,000.00		50,000.00	
Arming and equipping Naval Militia.	125,000.00	250,000.00	125,000.00		
Repairs.	30,000.00	30,000.00			
Contingent.	9,500.00	9,500.00			
Total.	12,003,390.00	11,644,075.00	281,620.00	740,935.00	141,620.00
Committee to investigate cost of United States armor plant.	5,000.00			5,000.00	
Bureau of Yards and Docks:					
Maintenance, Bureau of Yards and Docks.	1,600,000.00	1,695,496.00		4,504.00	
Contingent, Bureau of Yards and Docks.	50,000.00	50,000.00			
Total.	1,650,000.00	1,645,496.00		4,504.00	
Public works, Bureau of Yards and Docks:					
Navy yard, Boston, Mass.—					
Improvement of sanitation system, including wash rooms, lockers, and water-closets.	12,000.00			12,000.00	
Additional transportation facilities.	10,000.00			10,000.00	
Paving, to continue.		5,000.00	5,000.00		5,000.00
Hot-water supply system.		10,000.00	10,000.00		10,000.00

Electric distributing system, extensions.....				10,000.00			10,000.00		10,000.00
Sanitary connections for Dry No. 2.....				5,000.00			5,000.00		5,000.00
Total.....				22,000.00			30,000.00		30,000.00
Navy yard, New York, N. Y.—									
Paving and grading, to continue.....				15,000.00					
Yard railroad extension and equipment.....				15,000.00					
To complete Pier D.....				20,000.00			10,000.00		15,000.00
Toward construction of Pier C (cost not to exceed \$150,000) to complete.....				40,000.00					
Distributing system, extensions, to continue, including separator roadways.....				15,000.00			55,000.00		20,000.00
Extend second-floor mold loft.....				5,500.00			15,000.00		15,000.00
Dredging, to continue.....							25,000.00		25,000.00
Total.....				143,500.00			135,000.00		45,000.00
Navy yard, Philadelphia, Pa.—									
Quay walks and piers.....				50,000.00					
Power-plant improvement (to install rotary converters).....				15,000.00					
Building slip and equipment.....				200,000.00					
Railroad system, extensions.....							10,000.00		10,000.00
Distribution systems, extension.....							10,000.00		10,000.00
Dredging, to continue.....							25,000.00		25,000.00
Paving, to continue.....							10,000.00		10,000.00
Total.....				265,000.00			55,000.00		265,000.00
Navy yard, Washington, D. C.—									
Fireproof general storehouse (cost not to exceed \$225,000) to complete.....				100,000.00			125,000.00		25,000.00
Railroad system, improvements and extensions.....							10,000.00		10,000.00
Electric system, extensions.....							10,000.00		10,000.00
Total.....				100,000.00			145,000.00		45,000.00
Navy yard, Norfolk, Va.—									
Repairs, buildings, St. Helena.....				25,000.00					
Building for school.....							75,000.00		75,000.00
Railroad system, extensions.....							15,000.00		15,000.00
Disinfecting plant.....							15,000.00		15,000.00
Dry dock.....							200,000.00		200,000.00
Total.....				25,000.00			305,000.00		305,000.00
Navy yard, Charleston, S. C.—									
To complete torpedo-boat berths (to cost not exceeding \$300,000).....				150,000.00					
Dredging, to continue.....				20,000.00			20,000.00		
Sewer system, extensions.....				5,000.00					
Conduit system, extensions, to continue.....							10,000.00		10,000.00
Paving and grading, to continue.....									
Total.....				180,000.00			30,000.00		180,000.00

Comparative statement of estimates and appropriations, 1915-16, Navy Department—Continued.

Naval Establishment.	Appropriated, 1916.	Estimates, 1916.	Increase of estimates for 1916 over amount appro- priated for 1915 for same pur- pose.	Decrease of estimates for 1916 as com- pared with amount appro- priated for 1915 for same pur- pose.	New items, 1916.
Public works, Bureau of Yards and Docks—Continued.					
Naval station, Key West, Fla.—		\$5,000.00	\$5,000.00		\$5,000.00
Dredging, to continue.....					
Navy yard, Mare Island, Cal.—					
To complete quay wall.....	\$20,000.00			\$20,000.00	
Modernizing electric-power and light-distributing systems.....	10,000.00			10,000.00	
Improvement of hydraulics, Mare Island Straits.....	207,000.00			207,000.00	
Dredging and diking, to continue.....	20,000.00				
Railroad system, extensions.....		20,000.00			10,000.00
Garbage crematory.....		10,000.00			7,500.00
Improvements and extensions to distributing systems.....		7,500.00			15,000.00
Oil storage.....		15,000.00			12,500.00
Total.....	257,000.00	65,000.00	45,000.00	237,000.00	45,000.00
Navy yard, Puget Sound, Wash.—					
To complete ship fitters' shop, mold loft, and structural steel storage.....	\$155,000.00			155,000.00	
Dredging, to continue.....		15,000.00			15,000.00
Railroad system, extensions.....		25,000.00			25,000.00
Total.....	155,000.00	40,000.00	40,000.00	155,000.00	40,000.00
Naval station, Narragansett Bay, R. I.—					
Water-front improvements.....	10,000.00			10,000.00	
Naval station, Guantanamo, Cuba—					
Quarters for civilian employees.....	8,000.00				8,000.00
Recreation building for enlisted men.....	30,000.00				30,000.00
Total.....	38,000.00			38,000.00	
Naval station, Pearl Harbor, Hawaii—					
4 officers' quarters.....	20,000.00				20,000.00
To complete torpedo-boat slips.....	50,000.00				50,000.00
Total.....	70,000.00			70,000.00	

Naval proving ground, Indian Head, Md.— Toward extension of powder factory (cost not to exceed \$800,000), to complete public-work features.....	200,000.00	158,380.00	41,620.00	26,000.00 13,000.00 13,000.00 7,000.00 6,000.00 20,000.00	84,000.00	84,000.00	26,000.00 13,000.00 13,000.00 7,000.00 6,000.00 20,000.00
Naval magazine, Fort Mifflin, Pa.— 1 shell house..... Fixed-ammunition storehouse..... 1 magazine..... Re-forming plant extension..... Railroad system, extensions..... Fire protection.....							
Total.....							
Naval magazine, Puget Sound, Wash.— Shell house..... 2 magazines..... Storage sheds..... House on pier..... Pier extension..... Lightning protection.....							
Total.....							
Buildings and grounds, Naval Academy— To complete the construction of wharf and approach..... Sea wall, race boat shed toward county road.....	75,000.00	40,000.00	75,000.00	40,000.00	40,000.00	40,000.00	40,000.00
Total.....							
Depots for coal and other fuel— For additional fuel-oil storage at Melville, R. I..... Additional fuel-oil storage at Norfolk, Va..... Fuel-oil storage at San Diego, Cal..... Steel coaling tower at San Diego, Cal..... Fuel-oil storage at Puget Sound, Wash..... Fuel-oil storage, San Francisco Bay, Cal..... Fuel-oil storage at Mare Island, Cal..... Fuel-oil storage at Guantanamo Bay, Cuba..... Fuel-oil storage at Pearl Harbor, Hawaii..... Contingent.....	20,000.00 150,000.00 45,000.00 40,000.00 105,000.00 100,000.00 80,000.00 50,000.00 80,000.00 80,000.00 80,000.00	40,000.00 90,000.00 40,000.00 80,000.00 80,000.00 80,000.00 80,000.00 80,000.00 80,000.00 80,000.00 80,000.00	20,000.00 60,000.00 10,000.00 45,000.00 25,000.00 100,000.00 80,000.00 50,000.00 80,000.00 80,000.00 80,000.00	20,000.00 60,000.00 10,000.00 45,000.00 25,000.00 100,000.00 80,000.00 50,000.00 80,000.00 80,000.00 80,000.00	20,000.00 60,000.00 10,000.00 45,000.00 25,000.00 100,000.00 80,000.00 50,000.00 80,000.00 80,000.00 80,000.00	20,000.00 60,000.00 10,000.00 45,000.00 25,000.00 100,000.00 80,000.00 50,000.00 80,000.00 80,000.00 80,000.00	20,000.00 60,000.00 10,000.00 45,000.00 25,000.00 100,000.00 80,000.00 50,000.00 80,000.00 80,000.00 80,000.00 80,000.00
Total.....							
Naval disciplinary barracks.....							
Naval training station, San Francisco, Cal.— Dredging and extension of wharf for receiving ship.....							
Total.....							

Comparative statement of estimates and appropriations, 1915-16, Navy Department—Continued.

Naval Establishment.				
Public works, Bureau of Yards and Docks—Continued.				
Naval torpedo station, Newport, R. I.—				
1 assembly shop.....				
1 torpedo storehouse.....				
1 machine shop.....				
Total.....				
Naval hospital, New York, N. Y.—				
3 contagious-disease units.....				
Repairs and preservation at navy yards and stations.....				
Recapitulation—				
Navy yard, Boston, Mass.....				
Navy yard, New York, N. Y.....				
Navy yard, Philadelphia, Pa.....				
Navy yard, Washington, D. C.....				
Navy yard, Norfolk, Va.....				
Navy yard, Charleston, S. C.....				
Naval station, Key West, Fla.....				
Navy yard, Mare Island, Cal.....				
Navy yard, Puget Sound, Wash.....				
Naval station, Narragansett Bay, R. I.....				
Naval station, Guantanamo, Cuba.....				
Naval station, Pearl Harbor, Hawaii.....				
Naval proving ground, Indianhead, Md.....				
Naval magazine, Fort Mifflin, Pa.....				
Naval magazine, Puget Sound, Wash.....				
Buildings and grounds, Naval Academy.....				
Depots for coal and other fuel.....				
Naval disciplinary barracks.....				
Naval training station, San Francisco, Cal.....				
Naval torpedo station, Newport, R. I.....				
Naval hospital, New York, N. Y.....				
Repairs and preservation at navy yards and stations.....				
Total, public works.....				

Appropriated, 1915.	Estimates, 1916.	Increase of estimates for 1916 over amount appro- priated for 1915 for same pur- pose.	Decrease of estimates for 1916 as com- pared with amount appro- priated for 1915 for same pur- pose.	New items, 1916.
\$100,000.00				
85,000.00			\$100,000.00	
75,000.00			85,000.00	
			75,000.00	
260,000.00			260,000.00	
	\$15,000.00	\$15,000.00		
1,100,000.00	1,097,436.00		2,564.00	\$15,000.00
22,000.00	30,000.00	30,000.00		30,000.00
142,500.00	135,000.00	45,000.00		25,000.00
265,000.00	55,000.00	55,000.00		55,000.00
100,000.00	145,000.00	45,000.00		20,000.00
25,000.00	305,000.00	305,000.00		305,000.00
15,000.00	30,000.00	10,000.00		10,000.00
	5,000.00	5,000.00		5,000.00
237,000.00	45,000.00	45,000.00		237,000.00
150,000.00	40,000.00	40,000.00		150,000.00
38,000.00				38,000.00
70,000.00				70,000.00
260,000.00				260,000.00
	153,380.00		41,620.00	
	84,000.00	84,000.00		84,000.00
	58,000.00	58,000.00		58,000.00
	40,000.00	40,000.00		40,000.00
	500,000.00	240,000.00		240,000.00
75,000.00			75,000.00	
	15,000.00	15,000.00		15,000.00
260,000.00			260,000.00	
1,100,000.00	1,097,436.00		2,564.00	15,000.00
3,475,500.00	2,777,816.00	1,082,000.00	1,729,684.00	987,000.00

Bureau of Medicine and Surgery:					
Medical department.....	510,000.00	510,000.00			
Contingent, Bureau of Medicine and Surgery.....	142,000.00	142,000.00			
Transportation of remains.....	15,000.00	15,000.00			
Total.....	667,000.00	667,000.00			
Bureau of Supplies and Accounts:					
Provisions, Navy.....	7,713,954.50	7,601,014.00			112,940.50
Maintenance, Bureau of Supplies and Accounts.....	2,031,457.25	1,820,400.55			202,056.70
Freight, Bureau of Supplies and Accounts.....	525,000.00	625,000.00		100,000.00	
Coal and transportation.....	4,800,000.00	4,500,000.00			300,000.00
Total.....	15,070,411.75	14,556,414.55	100,000.00		615,027.20
Pay of the Navy.....	40,010,724.00	41,370,563.00	1,359,839.00		
Bureau of Construction and repair:					
Construction and repair of vessels.....	9,788,000.00	9,177,127.00			610,873.00
Improvement of construction plant—					
Navy yard, Portsmouth, N. H.....	10,000.00	10,000.00			
Navy yard, Boston, Mass.....	10,000.00	10,000.00			
Navy yard, New York, N. Y.....	20,000.00	20,000.00			
Navy yard, Philadelphia, Pa.....	15,000.00	15,000.00			
Navy yard, Norfolk, Va.....	15,000.00	15,000.00			
Navy yard, Charleston, S. C.....	15,000.00	15,000.00			
Navy yard, Mare Island, Cal.....	15,000.00	15,000.00			
Navy yard, Puget Sound, Wash.....	10,000.00	10,000.00			
Total.....	9,803,000.00	9,287,127.00			610,873.00
Bureau of Steam Engineering:					
Engineering.....	8,080,000.00	7,797,973.00			282,027.00
High-power radio stations.....	400,000.00	400,000.00			
Engineering experiment station, United States Naval Academy, Annapolis, Md.—					
Experimental and research work.....	60,000.00	60,000.00			
Equipment of building.....	20,000.00	20,000.00			
Total.....	8,560,000.00	8,277,973.00			282,027.00
Naval Academy:					
Civil establishment.....	186,034.00	186,034.00			
Grant and miscellaneous expenses.....	33,600.00	33,600.00			
Maintenance and Repairs.....	279,116.00	279,116.00			
Total.....	498,650.00	498,650.00			

Comparative statement of estimates and appropriations, 1915-16, Navy Department—Continued.

Naval Establishment.		Appropriated, 1915.	Estimates, 1916.	Increase of estimates for 1916 over amount appro- priated for 1915 for same pur- pose.	Decrease of estimates for 1916 as com- pared with amount appro- priated for 1915 for same pur- pose.	New items, 1916.
United States Marine Corps:						
Pay of the Marine Corps:						
Pay, officers, active list.....		\$951,640.00	\$980,799.50	\$29,159.50		
Pay, officers, retired list.....		187,492.50	190,792.50	\$ 3,300.00		
Pay, noncommissioned officers, musicians, privates, active list.....		2,807,211.08	2,916,482.08	109,270.00		
Pay, enlisted men, retired list.....		147,411.00	150,887.00	3,476.00		
Uniform clothing.....		120,000.00	120,000.00			
Milieu.....		55,000.00	45,000.00		\$10,000.00	
Communication of quarters.....		42,000.00	46,000.00	4,000.00		
Pay civil force.....						
Office of the major general commandant.....		4,371.28	4,371.28			
Paymasters' Department.....		4,700.00	4,700.00			
Adjutant and Inspectors' Department.....		6,100.00	6,100.00			
Quartermasters' Department.....		20,540.00	20,540.00			
Total.....		4,345,469.86	4,494,754.33	159,284.47	10,000.00	
Quartermaster's Department, Marine Corps:						
Provisions.....		\$80,000.00	\$80,000.00			
Clothing.....		620,063.00	620,063.00			
Fuel.....		164,000.00	164,000.00			
Military stores.....		307,737.00	307,737.00			
Transportation and recruiting.....		317,000.00	317,000.00			
Repairs of barracks.....		140,000.00	140,000.00			
Forage.....		22,200.00	22,200.00			
Communication of quarters.....		79,000.00	79,000.00			
Contingent.....		460,000.00	460,000.00			
Total.....		3,000,000.00	3,000,000.00			
Increase of the Navy (exclusive of first year of new building program):						
Construction and machinery.....		11,387,617.00	13,464,459.00	2,076,842.00		
Torpedo boats.....		1,685,617.00	1,341,344.00		344,273.00	
Armor and armament.....		6,000,000.00	9,000,000.00	3,000,000.00		
Total.....		19,073,234.00	23,806,803.00	5,076,842.00	344,273.00	

Increase of the Navy (first year of proposed building program):

Construction and machinery.....	8,260,000.00	7,575,000.00	.....	685,000.00	.....
Torpedo boats.....	1,825,000.00	2,225,000.00	.....	400,000.00	.....
Armor and armament.....	11,412,500.00	9,424,998.00	.....	.....	1,987,502.00
Equipment.....	521,000.00	.....	.....	.....	521,000.00
Total.....	22,018,500.00	19,224,998.00	400,000.00	3,183,502.00	.....

Comparative statement of estimates and appropriations, 1915-16, Navy Department—Continued.

RECAPITULATION.

Naval Establishment.	Final approved estimates, 1915.	Appropriated, 1915.	Estimates, 1916.	Increase of estimates for 1916 over amount appropriated for 1915 for same purpose.	Decrease of estimates for 1916 as compared with amount appropriated for 1915 for same purpose.	New items, 1916.
Pay, miscellaneous.....	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00			
Contingent, Navy.....	150,000.00	150,000.00	46,000.00		\$104,000.00	
Care of lepers, Islands of Guam and Cullion.....	14,000.00	14,000.00	14,000.00			
Bureau of Navigation.....	13,480,407.00	3,428,807.00	3,187,150.00		241,657.00	
Bureau of Ordnance.....	12,688,500.00	12,003,300.00	11,544,075.00		740,935.00	\$141,620.00
Committee to investigate cost of United States armor plant.....		5,000.00		\$281,620.00	5,000.00	
Bureau of Yards and Docks.....	1,750,000.00	1,650,000.00	1,645,496.00		4,504.00	
Public works, navy yards and stations.....	5,285,600.00	3,475,500.00	2,777,816.00		1,728,684.00	957,000.00
Bureau of Medicine and Surgery.....	667,000.00	667,000.00	667,000.00			
Bureau of Supplies and Accounts.....	15,072,941.75	15,070,441.75	14,555,414.55		615,027.20	
Pay of the Navy.....	40,050,724.00	40,010,724.00	41,370,563.00	1,359,839.00		
Bureau of Construction and Repair.....	9,900,400.00	9,968,000.00	9,257,127.00		610,873.00	
Bureau of Steam Engineering.....	8,162,000.00	8,560,000.00	8,277,973.00		282,027.00	
Naval Academy.....	407,550.00	498,650.00	498,650.00			
Marine Corps.....						
Paymaster.....	4,353,206.78	4,345,469.88	4,494,754.33	149,284.47		
Quartermaster.....	3,000,000.00	3,000,000.00	3,000,000.00			
Total (exclusive of "Increase of the Navy").....	106,082,219.53	103,776,982.61	102,366,018.88	2,922,743.47	4,333,707.20	1,098,620.00
Increase of the Navy (exclusive of first year of new building program):						
Construction and machinery.....	11,387,617.00	11,387,617.00	13,464,459.00	2,076,842.00		
Torpedo boats.....	1,686,617.00	1,686,617.00	1,341,344.00		344,273.00	
Armor and armament.....	6,000,000.00	6,000,000.00	9,000,000.00	3,000,000.00		
Total.....	19,073,234.00	19,073,234.00	23,806,803.00	5,076,842.00	344,273.00	
Total (exclusive of new building program).....	126,156,453.53	122,850,216.61	126,171,821.88	7,999,585.47	4,677,980.20	1,098,620.00
Increase of the Navy (department's proposed building program):						
Construction and machinery.....	7,800,000.00	8,260,000.00	7,575,000.00		685,000.00	
Torpedo boats.....	1,060,000.00	1,825,000.00	2,226,000.00	400,000.00		

Armor and armament.....	10,091,000.00	11,412,500.00	9,424,998.00	.....	1,987,502.00	.....
Equipment.....	311,000.00	521,000.00	.....	.....	521,000.00	.....
Total.....	19,232,000.00	22,015,500.00	19,224,998.00	400,000.00	3,198,502.00	.....
Total, increase of the Navy, both programs.....	38,335,284.00	41,091,784.00	43,080,801.00	5,476,942.00	3,537,776.00	.....
Grand total.....	144,417,483.83	144,868,716.41	146,396,819.88	8,369,586.47	7,871,482.20	1,086,620.00

1 Includes \$428,200 of the estimates of appropriations under the former Bureau of Equipment.
 2 Includes 700,000 of the estimates of appropriations under the former Bureau of Equipment.
 3 Includes 6,184,400 of the estimates of appropriations under the former Bureau of Equipment.
 4 Includes 1,640,400 of the estimates of appropriations under the former Bureau of Equipment.
 5 Includes 2,162,000 of the estimates of appropriations under the former Bureau of Equipment.

10,000,000 the final approved estimate for the Bureau of Equipment, 1915.

Navy Department.		Appropriated, 1916.	Estimates, 1916.	Increase of estimates for 1916 over amount appro- priated for 1915 for same pur- pose.	Decrease of estimates for 1916 as com- pared with amount appro- priated for 1915 for same pur- pose.	New items, 1916.
Office of the Secretary of the Navy:						
Salaries.....	.....	\$83,580.00	\$83,580.00	.....	.....	.....
Office of the solicitor—						
Salaries.....	.....	16,990.00	16,990.00	.....	.....	.....
Library—						
Salaries.....	.....	3,980.00	3,980.00	.....	.....	.....
Office of Naval Records of the Rebellion—						
Salaries.....	.....	17,740.00	17,740.00	.....	.....	.....
Necessary traveling expenses for collection of records.....	.....	100.00	100.00	.....	.....	.....
Total.....	.....	17,840.00	17,840.00	.....	.....	.....
Office of the Judge Advocate General—						
Salaries.....	.....	12,320.00	12,320.00	.....	.....	.....
Bureau of Navigation:						
Salaries.....	.....	80,650.00	80,650.00	.....	.....	.....

Comparative statement of estimates and appropriations, 1915-16, Navy Department—Continued.

RECAPITULATION—Continued.

Navy Department.		Appropriated, 1915.	Estimates, 1916.	Increase of estimates for 1916 over amount appro- priated for 1915 for same pur- pose.	Decrease of estimates for 1916 as com- pared with amount appro- priated for 1915 for same pur- pose.	New items, 1916.
Bureau of Navigation—Continued.						
Office of Naval Intelligence:						
Salaries.....		\$12,300.00	\$12,300.00			
Hydrographic Office—						
Salaries.....		123,660.00	123,660.00			
Contingent and miscellaneous expenses, Hydrographic Office—						
For purchase of copper plates, etc.....		26,000.00	26,000.00			
Contingent expenses of branch offices.....		11,000.00	11,000.00			
Services of necessary employees at branch offices.....		17,960.00	17,960.00		\$2,000.00	
Pilot chart, North Pacific Ocean.....		2,000.00				
Total.....		180,620.00	178,620.00		2,000.00	
Naval Observatory—						
Salaries, Naval Observatory.....		44,240.00	44,240.00			
Contingent and miscellaneous expenses—						
Miscellaneous computations.....		5,000.00	5,000.00			
Books, etc.....		750.00	750.00			
Apparatus, etc.....		2,000.00	2,000.00			
Repairs, etc.....		3,000.00	3,000.00			
Fuel, etc.....		8,000.00	8,000.00			
Grounds and roads.....			5,000.00	\$5,000.00		\$5,000.00
Total.....		62,990.00	67,990.00	5,000.00		5,000.00
Nautical Almanac Office—						
Salaries, Nautical Almanac Office.....		15,640.00	19,640.00	4,000.00		
Pay of computers on placework, etc.....		7,000.00	3,000.00		4,000.00	
Total.....		22,640.00	22,640.00	4,000.00	4,000.00	
Bureau of Steam Engineering:						
Salaries.....		45,490.00	45,490.00			

Bureau of Construction and Repair: Salaries.....	59,650.00	59,650.00		
Bureau of Ordnance: Salaries.....	33,210.00	33,210.00		
Bureau of Supplies and Accounts: Salaries.....	115,200.00	115,200.00		
Bureau of Medicine and Surgery: Salaries.....	19,950.00	19,950.00		
Bureau of Yards and Docks: Salaries.....	23,200.00	23,200.00		
Contingent expenses, Navy Department.....	72,000.00	72,000.00		

NOTE.—The Treasury Department has been requested to include an estimate of \$145,000 for printing and binding for the Navy Department for the fiscal year ending June 30, 1916.

RECAPITULATION.

Secretary's office.....	1	\$33,580.00	\$33,580.00		
Office of the Solicitor.....		16,960.00	16,960.00		
Library of the Navy Department.....		3,860.00	3,860.00		
Office of Naval Records of the Rebellion.....		17,840.00	17,840.00		
Office of the Judge Advocate General.....		12,320.00	12,320.00		
Bureau of Navigation.....		89,850.00	89,850.00		
Office of Naval Intelligence.....		12,800.00	12,800.00		
Hydrographic Office.....		16,920.00	16,920.00		
Naval Observatory.....		22,840.00	22,840.00		
Naval Almirante Office.....		27,840.00	27,840.00		
Bureau of Steam Engineering.....		45,400.00	45,400.00		
Bureau of Construction and Repair.....		59,650.00	59,650.00		
Bureau of Ordnance.....		33,210.00	33,210.00		
Bureau of Supplies and Accounts.....		115,200.00	115,200.00		
Bureau of Medicine and Surgery.....		19,950.00	19,950.00		
Bureau of Yards and Docks.....		23,200.00	23,200.00		
Contingent expenses, Navy Department.....		72,000.00	72,000.00		
Total.....		865,790.00	865,790.00	5,000.00	2,000.00
					5,000.00

1 Includes \$7,120.00 of the appropriation for "Salaries, Bureau of Equipment, 1915."
 2 Includes 1,200.00 of the appropriation for "Salaries, Bureau of Equipment, 1915."
 3 Includes 13,000.00 of the appropriation for "Salaries, Bureau of Equipment, 1915."
 4 Includes 1,000.00 of the appropriation for "Salaries, Bureau of Equipment, 1915."
 5 Includes 2,500.00 of the appropriation for "Salaries, Bureau of Equipment, 1915."
 6 Includes 2,500.00 of the appropriation for "Salaries, Bureau of Equipment, 1915."

\$3,170.00 — total of the appropriation for "Salaries, Bureau of Equipment, 1915."

Comparative statement of estimates and appropriations, 1915-16, Navy Department—Continued.

SUMMARY.

Naval Establishment.	Original estimates, 1915.	Final estimates, 1915.	Appropriated, 1915.	Estimates, 1916.	Increase (+) and decrease (-), estimates 1916, compared with appropriations, 1915.	Increase (+) and decrease (-), estimates 1916, compared with final estimates, 1915.
Legislative bill.....	\$937,270.00	\$932,300.00	\$932,790.00	\$935,790.00	+ \$3,000.00	+ \$3,400.00
Naval bill (exclusive of new building program).....	134,890,942.78	125,156,453.53	122,850,216.61	126,171,821.88	+ 8,321,605.27	+ 1,016,368.35
Permanent annual and indefinite appropriations.....	1,881,477.00	1,881,477.00	2,151,477.00	2,151,477.00	.....	+ 270,000.00
Total for Navy Department (exclusive of new building program).....	137,708,689.78	127,969,230.53	125,864,483.61	129,189,088.88	+ 3,324,605.27	+ 1,290,798.35
New building program (cost of first year's work).....	19,262,000.00	19,262,000.00	22,018,500.00	19,224,998.00	- 2,793,502.00	- 37,002.00
Grand total.....	156,970,689.78	147,161,230.53	147,882,983.61	148,414,086.88	+ 531,103.27	+ 1,252,796.35

REPORT OF THE SOLICITOR.

NAVY DEPARTMENT,
OFFICE OF THE SOLICITOR,
Washington, October 1, 1914.

SIR: The business of this office has been handled, so far as the office force is concerned, in a manner equally satisfactory to that described in the report for the last fiscal year, but owing to the removal, in April last, of the employees from one of the two rooms occupied by the office on the second floor to a room on the fourth floor forming part of the library, the transaction of the business has been seriously hampered, and that arrangement, which continues, is detrimental to the public interests.

When the separation of the two parts of the office was made it was represented that the arrangement would not have to be endured for more than two weeks, but it has now lasted for many months. The circumstance of having the force of the office crowded into two rooms, as heretofore, was disadvantageous enough, but the disorganization of the working plan and the lumbering up of the remaining room on the second floor in the manner necessitated by the sudden move and the arrangement of furniture, etc., for temporary conditions produce very bad results. A great part of the work done requires close application and careful and connected thinking, and such concentration can be effected only with the greatest difficulty and at the expense of time when seclusion and quiet are not attainable. There are four typewriters in one room, and in that same room all consultations among employees and with attorneys and other representatives from outside must be carried on. With the head of the office and four other persons huddled in this one room, it is surprising that work of the high quality turned out by the employees can be accomplished, but, as pointed out above, it is accomplished at considerable sacrifice to the department's interests. The inconvenience and annoyance and the hindrance to business are very great, and it is earnestly recommended that the situation be remedied at an early date.

CONTRACTS.

The contract business has continued on an increasing scale. The number of contracts and bonds handled, the amounts involved, and the questions arising for settlement have increased considerably.

FREIGHT AND PASSENGER RATES PAID BY THE DEPARTMENT.

The contention with the common carriers over the rates charged for transportation of freight and passengers in certain cases conducted before the Interstate Commerce Commission, as outlined in the report for the previous year, has shown further satisfactory results. The department's attitude toward the matter is meeting with

acquiescence generally on the part of the carriers, and the number of cases that will require attention hereafter will, it is believed, gradually diminish to negligible proportions and admit of disposal without the intervention of the Interstate Commerce Commission.

REIMBURSEMENT FOR USE OF PATENTS.

Within the last year development in the art of wireless telegraphy has resulted in widespread controversy among the prominent operating and manufacturing companies over questions of infringement of patents, and the department has unavoidably been obliged to ask aid from the Department of Justice for the protection of the Government's interests against injunctions forbidding contractors to manufacture and deliver articles needed for the naval service. The act of June 25, 1910, which provides protection through suits in the Court of Claims, for the owners of patents used by the Government, does not afford protection in the cases referred to where injunction has been sought, and the Department of Justice finds it difficult to provide the necessary legal assistance for the protection of this department's interests in patent cases not arising in the Court of Claims. It would seem to be necessary, therefore, that some arrangement be effected whereby this department may have expert legal assistance where the public interests require conserving by proper proceedings in cases of litigation between contending owners of patents. It is suggested that the matter be taken up with the Department of Justice with a view to cooperation between the two departments.

COLLISION CLAIMS.

During the fiscal year this office considered 37 cases involving collision of naval vessels. The total estimated damages suffered in these collisions amounted to approximately \$42,000. The department, after a careful consideration of the facts, disallowed during the year claims for damages in collision cases in the total amount of approximately \$13,000. Total collections in the amount of \$916.10 were made on behalf of the Government in 8 cases. No further action has been taken in respect to 7 of the collision cases, while 5 cases involving damages in the amount of \$11,071.98 are in course of settlement; 13 collision claims were adjusted by the department and reported to the Congress for payment as claims against the Government in accordance with the provisions of the act of June 24, 1910 (36 Stat., 607), during the fiscal year. Appropriations in the total amount of \$2,231 were made from which these particular claims have been satisfied.

The bill referred to in the last report as embracing collision claims involving more than \$500 was enacted by the Congress on August 21, 1914 (Private, No. 125, 63d Cong.). This act covers 20 cases and involved an appropriation of \$46,219.85 in full satisfaction of the several claims. The necessary steps have been initiated to effect final settlement of each of these claims.

THE EIGHT-HOUR WORKDAY.

Considerable progress is believed to have been made toward the establishment of a universal eight-hour day under the influence of

the eight-hour enactments during the last several years, and particularly that of the act of June 19, 1912, to the discussion of which in the report for the previous year attention is invited. Very few instances have occurred of violation of that law, and of such violations as have occurred nearly all are believed to have been the result of oversight or misinterpretation of the law. Adjustment of conditions to the growing custom has, in great measure, passed the derangement necessarily resulting from the friction and confusion of alteration and experiment, and it is not believed that the department has suffered any disadvantage or greater expense than the Government should not willingly bear as a contribution to the betterment of the commonweal.

DOMESTIC MATERIAL.

The modification by the act of October 3, 1913, of the tariff rates on imported material of foreign manufacture has had a very decidedly beneficial effect; both directly and indirectly, on the prices of many articles required for building, repairing, arming, and equipping naval vessels and operating other elements of the Naval Establishment, and the reduction in prices has not effected a diminution in quality or efficiency of material and appliances. This improved condition is particularly acceptable in view of the progressively larger scale on which the manufacturing and constructive operations of the Navy Department are and probably will be conducted.

IMPROVEMENT OF ELIZABETH RIVER.

The rehearing of the injunction proceedings referred to in the last report as delaying the widening and deepening of the channel of the southern branch of the Elizabeth River, opposite Dry Dock No. 3, navy yard, Norfolk, was duly granted by the United States District Court for the Eastern District of Virginia. Upon this rehearing the court rendered, on November 17, 1913 (208 Fed., 1022), an opinion adverse to the Government's contention, although this opinion materially modified the prior opinion rendered in the case.

An appeal was taken by the Government to the circuit court of appeals, and an opinion was handed down by this court under date of June 1, 1914, reversing the decision rendered by the lower court and entirely sustaining the contention that has been made by the Government in respect to its power to effect the improvements directed by the Congress. The owners of the property involved in these proceedings thereupon took steps to appeal the case to the Supreme Court. The office understands informally that the appeal was authorized on the 8th of September. The question of the rights of the Government pending the decision of the Supreme Court is receiving the consideration of the Department of Justice.

BRANCH RAILROAD TO NAVY YARD, WASHINGTON.

The matter of the construction of a branch railroad track to the Washington Navy Yard under the provisions of the act of June 24, 1910, has been held in abeyance for some time awaiting decision by the department as to whether a new spur track should be built on the east side of the yard or whether entrance to the yard should be effected by rearrangement of the old spur track on the west side.

The delay of four years that has occurred since authority was obtained to build a track on the east side will be added to by the necessity for obtaining additional legislation if it should be decided to have the track enter the yard on the other side, as has been under consideration.

OBSERVATORY CIRCLE LANDS.

The long drawn out negotiations for acquiring all private lands within the Naval Observatory Circle are still unconcluded. The plan of sale and exchange indicated in the report for last year has been carried out in part—that is to say, the owners of “Normanstone” executed and delivered to the department two deeds, dated August 4, 1913, for the two parcels into which that tract was divided. For the larger of the two tracts the department has paid in full, the price being \$13,959 in money and a deed to the triangular tract of Government land outside and adjacent to the circle. The smaller part of “Normanstone” is valued in the agreement reached and is stated in the deed at \$4,041. An appropriation for this amount was estimated for, but the House Committee on Appropriations omitted it in drafting the bill, so that there is no immediate prospect of payment for this land. Fair dealing on the part of the Government requires that the appropriation should be passed and payment made without further delay, and it is earnestly recommended that the matter be urged upon the attention of the Congress.

MEASURED MILE TRIAL COURSES.

Puget Sound, Wash.—In the report for last year attention was again invited to the need of permanent beacons for marking the measured mile trial course in Puget Sound for the standardization of naval vessels on the west coast and to the fact that the purchase of small tracts of land would be necessary for the erection of such beacons. This matter is, it is believed, becoming one of greater importance every year, and owing to the increase of population and the development of industries in that region the longer action is postponed the higher the purchase price of land must be.

Rockland, Me.—A few years ago sites for permanent beacons to mark the trial course at Rockland were bought by the department and the beacons erected. At present the conditions there appear to be satisfactory, but Crescent Beach, where one of the beacons is located, is a summer resort that seems to be growing in popularity, and although the lay of the land is conducive to the maintenance of existing conditions, it is not improbable that structures of one kind or another may before many years be erected in such places as to obstruct observations between ships on the trial course and the Crescent Beach beacon. The Board of Inspection and Survey for Ships has recommended that, owing to the danger of future interference with the line of vision to the beacon, certain additional tracts of land between the beacon and the trial course be bought to insure permanent maintenance of a satisfactory line of vision.

TORPEDO STATION NEAR THE PACIFIC COAST OF THE UNITED STATES.

The awards in the condemnation proceedings referred to in the last report as being instituted to acquire title to the site heretofore selected on the Keyport Peninsula, Kitsap County, Wash., for the

establishment of the naval torpedo station near the Pacific coast have been confirmed in the total amount of \$60,801.39. Under these proceedings the United States has acquired title to a tract comprising about 88 acres of upland with the appurtenant shore and tide lands, together with a strip of shore and tide lands extending in a southerly direction for between 3 and 4 miles from the tract proper.

While the title to this site is now in the United States, the department, approving the suggestion of the United States attorney and desiring to cause as little hardship as possible to the former owners of the property, has permitted them to continue to occupy their land until such time as the growing crops may be removed. This permission was granted with the understanding that the development of the site was not to be interfered with, and that the occupancy was not to continue beyond the 1st of November, 1914.

FRESH-WATER SUPPLY SYSTEM AT NAVAL STATION, PEARL HARBOR, HAWAII.

The negotiations for the acquisition of the water lot and right of way for pipe line from the naval station at Pearl Harbor referred to in the last report have been consummated.

LAND AT THE GOVERNMENT LANDING, NEWPORT, R. I.

In accordance with the provisions of the act of March 4, 1913 (37 Stat., 900), the department entered into negotiations for the purchase of the wharfage property lying to the north of the present Government landing at Newport. Satisfactory terms were arranged under which the title to this property, comprising some 33,000 square feet and having a water frontage of about 90 feet, has been acquired by the Government at a cost of \$35,000. This property will be of material benefit to the Government in the development of its wharfage property at Newport.

LANDS AT THE NAVY YARD, MARE ISLAND, CAL.

The title to certain lands on Mare Island lying to the north of the navy yard proper has been in dispute for a number of years. The department, on behalf of the Government, asserted title to these lands under the Executive order of February 11, 1853, establishing the navy yard on this island. Title adverse to the Government was set up to the lands under the swamp and overflowed land act of September 28, 1850 (9 Stat., 519). Ejectment proceedings instituted by the adverse claimant have been before the United States District Court for the Northern District of California for several years. These proceedings were finally determined by the court in a decision handed down on February 7, 1914 (212 Fed., 765), which decision was favorable to the Government. The lands covered by this decision embrace about 466 acres and are valued at about \$25,000.

LANDS FOR RADIO-STATION SITES.

During the past year negotiations have been entered into for the acquisition of the site for a high-power radio station on the Pacific coast that is to form one of the series of high-power radio stations authorized by the act of August 22, 1913 (37 Stat., 338), and of the site for a radio station on the coast of Texas. The site selected for the Pacific coast station is located near San Diego, Cal., and com-

prises about 73 acres, while the site selected for the Texas station is located near Point Isabel, Tex., and comprises about 21 acres. Satisfactory understandings as to the prices to be paid for these sites have been reached with the owners. Delay in the final acquisition of the sites has occurred by reason of certain defects that have developed in the titles of the present owners. It is expected that these defects will be cured in the near future and that the department will soon be in a position to begin the work of developing the sites.

TITLE PAPERS TO NAVAL LANDS.

Owing to the volume of current work in the office little progress has been made in the work of compiling the title papers to naval lands referred to in the report for last year. It is hoped, however, that during the current year material progress will be made in this work.

WORK PERFORMED IN EXCESS OF EIGHT HOURS A DAY AT NAVY YARDS BETWEEN 1878 AND 1882.

Inquiries are being constantly received in regard to extra pay believed to be due under the department's circular No. 8, of March 21, 1878, to men who worked in excess of 8 hours a day at navy yards between 1878 and 1882. Said circular specified the hours of labor at the yards on the basis of a 10-hour day, but it declared that the department would contract for the labor of mechanics, foremen, leadingmen, and laborers on the basis of 8 hours a day, provided, however, that all workmen electing to labor 10 hours a day should receive a proportionate increase of their wages.

For some reason not now known many workmen at the different yards worked 10 hours a day, but did not receive the proportionate increase of wages, and they or their widows or heirs are now seeking the extra pay involved. Many claims of this kind were filed in the Court of Claims and disposed of, but, under a statute of limitations, the time within which such claims could be filed in the court expired years ago. Since then, however, the court has been empowered by Senate or House special resolutions to examine into and report upon similar cases specifically named in the resolutions, and claims not so referred to the court can not be considered.

Claimants whose cases have never been referred to the Court of Claims are informed when they write to the department that there is no available appropriation from which they can be paid, and that it is necessary to secure special authority from Congress to have their cases examined into and reported on by the Court of Claims as to the facts before an appropriation can be made for payment of the claims if found to be just.

A bill known as the omnibus-claims bill, which has been before the Congress for several sessions, provides for the payment of a number of such claims that were referred to and reported on by the court. What the prospects are for the passage of that bill in the future can not, of course, be told; but the claims are regarded as worthy, and the persons that will receive the money when appropriated are no doubt enduring hardship from the lack of it.

GRAHAM EGERTON, *Solicitor.*

REPORT OF THE JUDGE ADVOCATE GENERAL.

NAVY DEPARTMENT,
OFFICE OF THE JUDGE ADVOCATE GENERAL,
Washington, September 14, 1914.

From: Judge Advocate General.

To: Secretary of the Navy.

Subject: Annual report of the Judge Advocate General of the Navy.

The following is a report of the operations of this office for the fiscal year 1914:

Capt. Robert L. Russell, United States Navy, was relieved by me as Judge Advocate General on November 5, 1913.

DUTIES

The duties of the Judge Advocate General are prescribed by article R 134, United States Navy Regulations, 1913. These duties naturally subdivide themselves under the following headings:

- I. Administration of justice.
- II. Officers' records (including examinations, etc.).
- III. Legislation.
- IV. Miscellaneous.
- V. Legal matters.

I.

ADMINISTRATION OF JUSTICE.

Under this heading may be grouped boards of inquest, boards of investigation, courts of inquiry, general courts-martial—department, station, and fleet cases—reviewing records of summary courts-martial and deck courts, duties relating to convening and dissolving courts and boards, framing specifications, the supervision of naval prisons and prisoners, and correspondence from prisoners' families, friends, attorneys, etc., in their behalf.

The following tables show the operations of this office under the various subheadings:

COURTS OF INQUIRY, BOARDS OF INVESTIGATION, AND BOARDS OF INQUEST.

The records of courts of inquiry, as set forth in the following table, are in large part made up of the records of preliminary investigations conducted by boards of investigation and boards of inquest, and in

like manner the records of boards of investigation are in many cases made up of the records of preliminary investigations conducted by boards of inquest. In such cases the records of the preliminary investigation were reviewed in conjunction with the record of proceedings of the final investigation.

Courts of inquiry received and revised.....	77
Courts of inquiry followed by courts-martial.....	12
Courts of inquiry followed by action other than courts-martial.....	13
Courts of inquiry in which no further action was deemed necessary.....	52
Boards of investigation received and revised.....	129
Boards of inquest received and revised.....	55

GENERAL COURTS-MARTIAL.

Charges and specifications drawn up in this office during the fiscal year.

	Navy.	Marine Corps.	Total.
Officers.....	21	4	25
Enlisted men.....	1,157	296	1,453
Total trials ordered by the Secretary of the Navy.....	1,178	300	1,478
Charges withdrawn:			
To other courts-martial.....			1
On account of physical disability.....			6
Prisoners escaped.....			6
By order of the department.....			3
Nolle prosequi.....			2
Charges drawn but trials not completed before end of fiscal year.....			2
Plea in bar sustained.....			1
Total trials not completed.....			21
Cases tried by order of the Secretary of the Navy.....			1,457
Corresponding trials fiscal year 1913.....			1,385

Trials held at each naval station.

Portsmouth, N. H.....	23
Boston, Mass.....	101
New York, N. Y.....	455
Philadelphia, Pa.....	247
Norfolk, Va.....	229
Mare Island, Cal.....	205
Puget Sound, Wash.....	107
Charleston, S. C.....	30
Newport, R. I.....	11
Port Royal, S. C.....	18
Camp Elliott, Isthmian Canal Zone, Panama.....	12
Special.....	19
Total.....	1,457

Trials by order of officers of the Navy authorized to convene general courts-martial.

	Navy.	Marine Corps.	Total.
Officers.....	15	1	16
Enlisted men.....	203	78	281
Total.....	218	79	297
Corresponding trials, fiscal year, 1913.....	208	102	310

Total trials.

	Navy.	Marine Corps.	Total.
Officers:			
By order of the Secretary of the Navy.....	21	4	25
By order of officers of the Navy.....	15	1	16
Total.....	36	5	41
Enlisted men:			
By order of the Secretary of the Navy.....	1,139	298	1,437
By order of officers of the Navy.....	203	78	281
Total.....	1,342	371	1,713
Grand total.....	1,378	376	1,754
Fiscal year, 1913.....	1,319	376	1,695

Trials of officers.

Convicted.....	40
Acquitted.....	1
Total.....	41
Fiscal year, 1913.....	28

Trials of enlisted men.

	Navy.	Marine Corps.	Total.
Convicted.....	1,320	365	1,685
Acquitted.....	22	6	28
Total.....	1,342	371	1,713
Fiscal year, 1913.....	1,295	372	1,667

Schedule of principal offenses.

	Navy.	Marine Corps.	Total.
OFFICERS.			
Absence over leave.....	1		1
Absence over leave, neglect of duty.....	1		1
Absence over leave, disobeying the lawful order of his superior officer, falsehood, scandalous conduct tending to the destruction of good morals.....	1		1
Absence over leave, embezzlement, violation of a lawful regulation issued by the Secretary of the Navy.....	1		1
Assault with intent to commit rape, indecent assault, scandalous conduct tending to the destruction of good morals.....	1		1
Conduct unbecoming an officer and a gentleman.....	1	1	2
Conduct unbecoming an officer and a gentleman, scandalous conduct tending to the destruction of good morals.....	1		1
Culpable inefficiency in the performance of duty.....	1		1
Culpable inefficiency in the performance of duty, neglect of duty.....	2		2
Disrespect to superior officer.....	1		1
Drunkenness.....	2		2
Drunkenness on duty.....	2		2
Drunkenness, conduct unbecoming an officer and a gentleman.....	1	1	2
Drunkenness on duty, conduct to the prejudice of good order and discipline, violation of a lawful order issued by the Secretary of the Navy.....	1		1
Drunkenness, conduct to the prejudice of good order and discipline.....	1		1
Drunkenness on duty, conduct to the prejudice of good order and discipline.....		1	1
Drunkenness and neglect of duty.....	1		1
Drunkenness, conduct to the prejudice of good order and discipline, scandalous conduct tending to the destruction of good morals.....	1		1
Drunkenness, scandalous conduct tending to the destruction of good morals.....	1	2	3
Drunkenness, using abusive language toward another person in the Navy.....	1		1
Embezzlement, violation of a lawful order issued by the Secretary of the Navy.....	1		1
Falsehood, conduct unbecoming an officer and a gentleman, conduct to the prejudice of good order and discipline, scandalous conduct tending to the destruction of good morals.....	1		1
Falsehood, conduct unbecoming an officer and a gentleman, scandalous conduct tending to the destruction of good morals.....	1		1

Schedule of principal offenses—Continued.

	Navy.	Marine Corps.	Total.
OFFICERS—continued.			
Improperly hazarding a vessel of the Navy, and through inattention and negligence allowing her to run upon a shoal.....	2	.....	2
Neglect of duty.....	1	.....	1
Neglect of duty, conduct to the prejudice of good order and discipline.....	1	.....	1
Scandalous conduct tending to the destruction of good morals.....	4	.....	4
Using abusive language to superior officer.....	1	.....	1
Violation of a lawful regulation issued by the Secretary of the Navy, neglect of duty.....	1	.....	1
Total.....	35	5	40
Acquitted.....	1	.....	1
Total.....	36	5	41
ENLISTED MEN.			
Absence over leave.....	94	33	127
Absence without or over leave and fraudulent enlistment.....	2	.....	2
Absence without or over leave, conduct to the prejudice of good order and discipline, scandalous conduct tending to the destruction of good morals.....	39	16	55
Assaulting and striking another person in the Navy.....	3	1	4
Assaulting and striking superior officer, or threatening to assault and strike superior officer.....	8	1	9
Assaulting with a deadly weapon another person in the Navy.....	5	.....	5
Breaking arrest.....	.....	1	1
Conduct to the prejudice of good order and discipline.....	57	21	78
Culpable inefficiency in the performance of duty.....	2	.....	2
Desertion and breaking arrest.....	1	3	4
Desertion.....	750	137	887
Desertion and fraudulent enlistment.....	63	19	82
Desertion, conduct to the prejudice of good order and discipline, or scandalous conduct tending to the destruction of good morals.....	29	22	51
Disobeying a lawful order of his superior officer.....	5	1	6
Disrespectful in language and deportment to superior officer while in the execution of his office.....	3	.....	3
Drunkenness.....	2	1	3
Drunkenness on duty, post, or guard.....	9	15	24
Drunkenness, conduct to the prejudice of good order and discipline, or scandalous conduct tending to the destruction of good morals.....	15	10	25
Embezzlement.....	2	1	3
False swearing or perjury.....	5	.....	5
Fraudulent enlistment.....	122	23	145
Leaving station or post before being regularly relieved.....	.....	4	4
Maltreating an inhabitant.....	1	1	2
Manslaughter.....	.....	1	1
Murder.....	.....	1	1
Neglect of duty.....	.....	4	4
Refusing to obey a lawful order of his superior officer.....	13	2	15
Resisting arrest.....	1	1	2
Scandalous conduct tending to the destruction of good morals.....	29	11	40
Sleeping on watch or post.....	3	9	12
Sodomy.....	7	4	11
Robbery.....	1	1	2
Theft.....	29	10	39
Theft, scandalous conduct tending to the destruction of good morals, or conduct to the prejudice of good order and discipline.....	8	6	14
Using abusive, obscene, or threatening language toward another person in the service.....	4	1	5
Violation of article 14, Articles for the Government of the Navy.....	8	4	12
Total.....	1,320	365	1,685
Acquitted.....	22	6	28
Total.....	1,342	371	1,713

SUMMARY COURTS-MARTIAL.

	Navy.	Marine Corps.	Total.	Corresponding total, 1913.
Records received and revised.....	7,542	2,079	9,621	12,433
Cases disapproved.....	131	33	164	133
Acquitted.....	183	29	212	200
Bad-conduct discharges.....	1,273	364	1,642	1,946
Average trials per month.....	629	173	802	1,036

DECK COURTS.

	Navy.	Marine Corps.	Total.	Corresponding total, 1913.
Records received and reviewed.....	5,603	2,142	7,745	9,768
Disapproved.....	25	.....	25	66
Acquitted.....	79	11	90	76
Average trials per month.....	467	179	646	814

Percentage of enlisted personnel in the Navy and Marine Corps tried by court-martial during fiscal years 1913 and 1914.

	1914		1913	
	Navy	Marine Corps.	Navy	Marine Corps.
Total enlisted force July.....	48,068	9,777	47,515	9,777
Enlisted during year.....	18,947	8,889	17,611	4,042
Total enlisted force during the year subject to trial.....	67,015	13,666	65,126	13,819
Tried by general court-martial during year.....	1,342	371	1,295	372
Percentage tried by general court-martial.....	2.00	2.71	1.99	2.70
Tried by summary court-martial during year.....	7,542	2,079	9,946	2,487
Percentage tried by summary court-martial.....	11.25	15.21	15.27	18.00
Tried by deck court during year.....	5,803	2,142	7,285	2,483
Percentage tried by deck court.....	8.36	15.67	11.18	17.97

NOTE.—It will be noted that there was a marked falling off, as compared with the fiscal year, 1913, in the number of trials by both summary court-martial and deck court. In this connection it should be remarked that a considerable percentage of the enlisted personnel was in Mexican waters during the entire year, where there was little opportunity for overstaying liberty or absence without leave, which offenses constitute approximately 80 per cent of the total trials by minor courts.

It will also be noted that the percentages of men in both the Navy and Marine Corps tried by general court-martial were almost exactly the same for the two years under consideration.

Data concerning prisoners and detentioners.

	State prisons.	Naval prisons.	Disciplinary barracks.
Total number of enlisted personnel, Navy and Marine Corps, in confinement June 30, 1913.....	168	771	532
Total number of enlisted personnel, Navy and Marine Corps, who underwent confinement during the year.....	251	1,409	1,534
Number in confinement June 30, 1914.....	151	746	390
Percentage of enlisted personnel, Navy and Marine Corps, who underwent confinement.....	0.311	1.74	1.90
Percentage of total number (exclusive of criminal offenders) confined who were convicted of desertion or absence without or over leave.....	79.6	.....	.....
Percentage convicted of fraudulent enlistment.....	15.3	.....	.....

Total number of enlisted personnel, Navy and Marine Corps, who underwent confinement during the year, exclusive of those confined in State prisons.....	2,943
Total number dishonorably discharged from confinement, exclusive of those dishonorably discharged from confinement in State prisons.....	665
Total number unconditionally restored to duty.....	696
Total number restored to duty on probation in the service at large (for service in Mexico).....	293
Total of those restored to duty who were in the service in good standing June 30, 1914.....	846
Total of the number who underwent confinement during the year who were discharged with other than a dishonorable discharge, deaths, etc.....	133
Total number of enlisted personnel, Navy and Marine Corps, who were in confinement June 30, 1914, other than those confined in State prisons.....	1,136

Data concerning general court-martial detentioners at naval disciplinary barracks, Port Royal, S. C., and Puget Sound, Wash., for fiscal year 1914.

	Port Royal.			Puget Sound.			Grand total.
	Navy.	Marine Corps.	Total.	Navy.	Marine Corps.	Total.	
Number of men in detention June 30, 1913....	377	92	469	103	10	113	582
Detentioners received during year.....	581	124	705	201	46	247	952
Total number of detentioners handled during year.....	958	216	1,174	304	56	360	1,534
Number of men in detention June 30, 1914....	250	28	278	93	19	112	390
Transferred:							
To naval prisons for misconduct.....	5	4	9	28	4	32	41
To Government Hospital for Insane.....		1	1				1
To Naval Hospital, Las Animas (tuberculosis).....	1		1				1
Restored to duty unconditionally.....	396	96	491	135	22	157	648
Restored to duty on probation in the service at large.....	152	51	203				203
Discharged:							
Character bad.....		1	1				1
Ordinary.....	1		1	1		1	2
Undesirable.....	7	4	11	7	4	11	22
Dishonorable.....	131	26	157	25	4	29	186
Total number discharged.....	139	31	170	33	8	41	211
Miscellaneous:							
Placed on probation at disciplinary barracks.....	315	75	390	102	20	122	512
Reconfined in disciplinary barracks for misconduct.....	25	11	36	12		12	48
Detentioners escaped.....	1		1	1		1	2
Detentioners recaptured.....	1		1	1		1	2
Detentioners on probation deserted.....	12	6	18	15	3	18	36
Total number in desertion June 30, 1914.....	12	6	18	14	3	17	35
Found physically unfit for detention by Board of Medical Survey.....		1	1		2	2	3
Died.....	3		3	1		1	4
Number less than 21 years of age.....	48	1	49	22	1	23	72
Number of detentioners received at barracks after having served part of sentence in naval prisons.....	156	32	188	72	19	91	279
Received direct.....	426	92	518	128	27	155	673
Number convicted of desertion or absence without or over leave.....	512	89	601	198	30	228	829
Restored to duty for service in Mexico.....	141	45	186	56	31	87	273
Pay remitted for dependent relatives.....	34	1	35	6	1	7	42
Number discharged recommended for reenlistment.....	93	17	110		1	1	111

Report of general court-martial prisoners for fiscal year 1914—Continued.

	State prisons.											
	Connecticut.			Eastern State Penitentiary, Pennsylvania.			California.			New Hampshire.		
	Navy.	Marine Corps.	Total.	Navy.	Marine Corps.	Total.	Navy.	Marine Corps.	Total.	Navy.	Marine Corps.	Total.
Prisoners in confinement, June 30, 1913.....	15	6	21	7	2	9	22	16	48	76	14	90
Prisoners received during fiscal year.....	7	.....	7	10	3	13	16	7	23	30	10	40
Total number of prisoners confined during fiscal year.....	22	6	28	17	5	22	48	23	71	106	24	130
DISPOSITION.												
Prisoners in confinement June 30, 1914.....	13	4	17	13	4	17	27	10	37	66	14	80
Transferred to—												
Other naval prisons.....										2		2
Insane asylums.....	1		1									
Discharged:												
Dishonorably discharged, after serving sentence in State prisons.....	8	2	10	4	1	5	20	13	33	38	10	48
Miscellaneous:												
Restored to duty unconditionally.....							1		1	1		1
Found unfit for confinement by Board of medical survey.....	2		2	1		1	1		1	1		1
Pay remitted for dependent relatives.....	3		3							2	1	3

PRISON REPORTS.

The annual reports from the naval prisons and disciplinary barracks show them to be in an efficient and satisfactory condition. The naval prison at Boston was closed on April 25, 1914, owing to the necessity for the transfer to expeditionary duty of the officers and enlisted men of the Marine Corps employed as guards for prisoners. The prisoners confined in the naval prison, Boston, were transferred to the naval prison, Portsmouth, N. H., on the date of closing of the Boston prison.

The following excerpts from the annual reports of naval prisons and disciplinary barracks are deemed worthy of publication:

From the report of the commanding officer, disciplinary barracks, Port Royal, S. C.:

The discipline in the detention barracks has been very good, but has suffered from frequent changes and shortage of officers, noncommissioned officers, and guards.

During the first 10 months of the past fiscal year the scope of drills was extended, and much care was exercised in properly training all detentioners. The detentioners in all the various rates were drilled for at least one month before assignment to special details for such work as would be required of their rates on board ship. Detentioners are also required to perform a certain amount of guard duty within the stockade. The result has been most satisfactory, as has been shown by the trim, soldierly, and well set up appearance of the battalion of detentioners attested during all inspections.

During the first part of the year schools were inaugurated for the instruction of radio operators, electricians, machinists, yeomen, bakers, and cooks. The men under instruction were all transferred, but new classes have been started for radio operators and as far as possible men of all ratings receive a certain amount of instruction from practical work of the class for which they are best qualified to succeed. There have been transferred from here 15 men who have qualified as radio operators at this station, and unofficial reports of their progress in the service at large have been excellent. The class hours are 8 a. m. to 11.30 a. m. and 1 p. m. to 4.30 p. m., with lectures from 7 p. m. to 8.15 p. m.

It is not believed that all detentioners who serve their period in detention, even with conduct excellent, should be restored to duty. These men are under constant observation, during which the character of the man is carefully noted, and there are a few instances where lack of efficiency and mental incapacity have been pronounced. It is recommended that in such cases the commanding officer of the disciplinary barracks be authorized to discharge these men from the service upon expiration of two-thirds of their sentence.

In each company in the detention barracks there are detailed from its members acting petty officers, who are given as much authority and responsibility as possible. There are also a number of excellent men in the detention barracks who are detailed as mechanics and clerks.

From the medical officer's report:

The health of the detentioners has been excellent, as will be seen from the percentage of sick. During the year 17 cases were transferred to the hospital. Only cases of a severe nature or those requiring special treatment are sent to the hospital on account of inadequate means of guarding them while there. While under treatment at the sick bay the duty men and probationers are separated from the detentioners.

In the annual report of the disciplinary barracks, Puget Sound, are found the following statements:

From the commanding officer's report:

From April 27, 1914, until the end of the fiscal year the disciplinary barracks has been temporarily located on board the *Philadelphia*, under the command of the commanding officer of the receiving ship at Puget Sound.

After a few days, necessary to develop a suitable reorganization for the detentioners and probationers quartered on board ship, the regular routine of the disciplinary barracks, modified as necessary to suit the changed conditions under which the men were quartered, was resumed. Owing to the transfer of nearly all of the regular crew of the *Philadelphia* for service in Mexican waters, detentioners have been employed for

the routine work of upkeep and cleaning on board the *Philadelphia*. In view of the facilities for carrying them on, boat drills and battery drills have been added to the routine.

Owing to the depletion of the marine detachment of the *Philadelphia*, it has been necessary to assign several petty officers for duty in connection with the drill and instruction of detentioners. With this exception no difficulties have been experienced, and it is believed that the general principles of the detention system have been as well and as satisfactorily carried out on board the *Philadelphia* as they could be in a barracks. On the *Philadelphia* the prisoners and detentioners do not come in contact with one another, being quartered in separate compartments, and, in fact, one class of men might be unaware of the others' presence on board except as they meet in their way to or from their work or drills. With the exception of the fact that the *Philadelphia* is a prison ship, and that in general it is well to make as broad a distinction as possible between prisoners and detentioners, it is believed that this ship is better suited for carrying out the general idea of the detention system for naval detentioners than are shore barracks. A large proportion of the men at the disciplinary barracks are deserters—70 per cent of the whole. Many of these deserted because of their dissatisfaction with life on board ship, and all it involves. Since one of the avowed objects of the detention system is, by giving these men "another chance," to endeavor to reconcile them to the necessary disciplinary restrictions of a naval life, thereby making them of future value to the service, it seems that a better way to accomplish this object is by having them quartered on board ship, where their environment and mode of life more nearly resemble that in active service, than in barracks. At the barracks they sleep in beds, live in houses, are organized, drilled, and in every way treated more like soldiers than sailors. They do not even see the waters of the harbor. On board the *Philadelphia* they are berthed, messed, organized, and in general handled as they would be on a ship in commission. Boat drills, which they could not get at the barracks, have been added to their routine, as well as battery drills on board the receiving ship (*Charleston*). In short, every effort is being made to make their daily life, instruction, drills, and routine, resemble as closely as possible what these would be on board a ship in full commission, while at the same time maintaining the strictest discipline. The foregoing remarks do not, of course, apply to Marine detentioners, for whom the barracks system would seem to be better adapted.

From the medical officer's report:

The sanitary inspection is made weekly, and the ship has always been found clean and in excellent condition.

A large space of ground near the receiving ship building has been inclosed with a stockade and is used by prisoners and detentioners for recreation on Saturday afternoon and Sunday. This was proposed and built by the commanding officer with the idea of giving the prisoners something to occupy their time between Saturday noon and Monday. The result is excellent.

The commandant of the navy yard, Puget Sound, in an indorsement to the Department, says:

So far as may be observed the disciplinary barracks have been very successfully administered by the commanding officer of the receiving ship, and in my opinion naval detentioners can be better trained on board the *Philadelphia* than at the barracks and without duplication of plant and consequent expense.

From the report of the commanding officer, naval prison, Mare Island, Cal.:

The sanitary condition of the prison is excellent, and there are no recommendations to be made under this heading.

The classes in geography, history, spelling, high school and grammar school arithmetic are maintained under the direct supervision of a head teacher (a prisoner) and as many teachers from among the prisoners as may be necessary to conduct the classes. This school is held three times a week. Seamanship classes are held twice a week for instruction in knotting, splicing, weaving, and sennit work.

For amusements the prisoners are forced to depend upon checkerboards, books, and magazines, it not being possible to supply any outdoor amusements, as the prisoners are confined indoors all the time, but as the men receive so much work in the open air, and the prison is so well ventilated, it is not considered necessary that the prisoners be sent out for recreation. The prisoners are organized in such a manner as to facilitate the proper management and care of the prison, and details are so changed from time to time that all prisoners get an opportunity to work outside.

The report of the chaplain states:

The chaplain has conducted divine service in the prison on every Sunday afternoon about 1 o'clock, the service lasting for 45 or 50 minutes.

The report of the warden of the naval prison, U. S. S. *Philadelphia*, states:

The general court-martial prisoners confined aboard have been employed, except Sundays and holidays, at labor in the yard, at such work as the commandant directed, to wit: Printing office, repairing roads, cutting grass, constructing drains, building gutters, sifting gravel, barbering, tailoring, shoe repairing, clerking, gardening, and messmen.

When prisoners are not employed outside they are confined on board, for safe-keeping, in the berth deck compartment. Those whose duty requires that they be kept aboard are confined within a large cell compartment on the top gallant forecastle, and required to work one day a week outside, and the messmen are changed every 30 days. During inclement weather prisoners are employed in making deck swabs, hand swabs, and fenders, etc., on board this vessel.

Considering the class of men confined, their conduct has been very good. There has been but one summary court-martial awarded.

The rations have been well chosen, well cooked, and properly served, at all times.

There is no chaplain attached to this ship, but the local Young Men's Christian Association naval branch conducts the usual services.

The report of the medical officer of the naval prison on the U. S. S. *Philadelphia* states:

The general sanitary condition of the prison ship *Philadelphia* has been excellent. She is clean, well ventilated, and has been remarkably free from contagious and infectious diseases.

The food has been excellent; no complaints have been registered and no cases of food poisoning have appeared.

The sanitary inspection is made weekly, and the ship has always been found in excellent condition.

The report of the commanding officer, naval prison, Portsmouth, N. H., states:

As in the previous year, the marine guard has been depleted in numbers by reason of expeditionary forces, which renders insufficient guards to keep all prisoners employed every working day. When practicable all prisoners are worked outside from 7 to 11.30 a. m. and from 12.40 to 4.30 p. m., and the inside details for the kitchen, bakery, laundry, etc., employed at such hours as the nature of their employment requires. Prisoners regularly detailed for inside work are sent outside on certain half days weekly for benefit of their physical condition. Efforts have been made to concentrate jobs so that the maximum number of prisoners are employed.

The prison school has advanced in rapid strides in the past year. A more comprehensive and thorough course of study has been set out for the pupils. The school is first divided into two main classes which attend on alternate nights, the intervening night being reserved for studying the lessons assigned the previous night. Each main division is subdivided into six classes, with studies so graded in each as to provide a gradual advancement from the lowest or sixth grade to the first grade, consisting of the most advanced pupils and where algebra, commercial arithmetic, United States and general history, and higher mathematics are taught. When a new man enters the school, he is carefully examined by the overseer as to the extent of his previous schooling and apparent ability and assigned to the class for which he seems fitted. Upon mastering the lessons of the class first assigned to, the pupil is advanced to the next higher, and so on. This system of promotion affords an incentive to the pupil to work and provides for every grade of ability or energy. The instructors are prisoners detailed for the work under the supervision of the inside overseer and the officer of the day. The great improvement in conditions in the school has been further advanced by the energy of the inside overseer coupled with the intelligent cooperation of the prisoner instructors.

The prison library has been greatly increased during the past year, and at present embraces about 6,500 volumes. Each prisoner is visited by the prison librarian as often as possible for the purpose of distributing books. In this manner each prisoner is enabled to secure a maximum of good clean reading matter.

On the first and third Sundays of each month prisoners are permitted to receive visitors on the first floor of the administration building, out of sight of the other prisoners and the cell block. Church services are held at 11.30 a. m. each Sunday, Catholic and Protestant services alternating. Christian Science services are held every Sunday at 2.30 p. m. Sunday evenings are devoted to moving pictures for first class men.

Discipline among prisoners is good; 250 men are first class compared with 219 last year. Only 4 men are in the special red dress [lowest conduct class] as compared with 18 last year.

The report of the medical officer, naval prison, Portsmouth, N. H., states:

Ventilation.—The cell block is ideal in every particular, and although in winter the temperature frequently went below 60° F., the standard set, the physical welfare of the inmates was well maintained, as is attested by the fact that there has not been a case of pneumonia originating in this prison in over two years, and the number of nose, throat, and lung infections have been unusually few. Not so much can be said for the main building. The guard room occupies the whole fourth floor and with windows on all sides the ventilation is excellent. On the third and second floors storerooms, offices, dispensary, etc., have been constructed on the window sides, leaving a large open space in the center of the floor, which, although poorly lighted, enjoys a fair ventilation.

Comparing the average ration with Voit's Standard Dietary, it averages much higher in all of the food principles and exceeds it in calorific value by 840 grams.

The nutritive ratio of a well-balanced ration should be 1 : 5.5, not varying below 1 : 5 or above 1 : 7. This ratio between the proteids and carbohydrates in the prison ration is 1 : 5.2, and quite close to the ideal.

The amount of food needed by a man performing light work in terms of fuel value is 2,600 calories, 3,500 are required by a man performing hard work, and 3,800 for very hard work. The average of 3,860 calories present in the prison ration provides for work of the hardest type. It is believed by the medical officer that the food is sufficient in quantity and quality to maintain a proper metabolic balance.

Personnel.—The general health of the prisoners is excellent. I have never seen a more robust lot and comparative statistics at admission and discharge bear out the fact that this good condition is due to prison routine. There was instituted July 1, 1913, by the commanding officer a uniform system of physical examination to be made at the beginning and end of imprisonment. This system makes easy the discovery of transmissible diseases, provides sufficient data for the determination of the physical welfare of the prisoner and testifies as to the effect of prison routine upon the health of the inmates. It gives the medical officer an opportunity of learning the exact physical condition and past and present history of the prisoner. This record is a guide to his subsequent treatment and is an aid in determining the kind of labor he is physically able to perform.

The commanding officer of the naval prison on the U. S. S. *Southery* states:

School is held every night except Saturdays, Sundays, and holidays, at which there is always a good attendance.

The establishing of disciplinary ships here would be a great saving in the transportation of general court-martial prisoners from the northern naval districts, and the return of men here, which frequently happens, of those that do not make good at Port Royal.

There were no offenses committed by general court-martial prisoners during the fiscal year that warranted trial by deck court, summary or general court-martial.

The report of the medical officer of the naval prison on the U. S. S. *Southery* states:

The general sanitary condition of the *Topeka* and *Southery* has been excellent. Living spaces, water-closets, holds, and storerooms have been maintained in a scrupulously clean condition, and the ventilation of these compartments is satisfactory.

The clothing issued to prisoners is well adapted to this climate. There have been very few cases of "colds," bronchitis, tonsillitis, etc.

DEFECTIVES.

Laboratory experiments have proved conclusively that a large percentage of prisoners are "defectives." This does not mean that they are not legally responsible for their actions, but that they are subnormal in intelligence. Even large commercial firms are now in some instances safeguarding themselves against the employment of men of this class, one of whose proven characteristics is their inability to hold any position permanently. Naturally the Navy receives more than its share of these men. The Bureau of Medicine and Surgery is now engaged in the development of a mentality test practicable for application in recruiting, and when developed it is considered that it should be regarded fully as important a portion of the examination as the physical. The enlistment of these defectives is a positive detriment to the service. They rarely complete an enlistment, and, even when they do, are a constant drag on the ship on which they are serving. As above stated, they form a large percentage of the prison population.

CLEMENCY LETTERS.

An important item in the work of this office is the correspondence relating to clemency for prisoners. Incidentally these letters show that an important factor leading to desertion is family relations, many men feeling fully justified in violating their oath on account of family affairs. It is thought that careful instruction of the men will alleviate this condition. Many of the letters are of course written merely from the fullness of heart of a mother, wife, or sweetheart when the prisoner is as undeserving of their tears as he is of official clemency. Through the courtesy of the mayor, charitable organizations, and in some cases in small towns the postmaster, the cases are investigated before any action is taken. These investigations show a large number of the cases are undeserving.

GENERAL FEATURES OF PRISON SYSTEM.

As the general policy and procedure of the department in regard to the imprisonment of offenders and their rehabilitation and restoration to duty is not believed to be fully understood, it is thought the following brief synopsis of the general system of administration of justice in operation during the past year may be of value:

The men undergoing confinement may be divided into three general classes:

(1) *Criminals*.—Those guilty of acts of moral turpitude which would be punished by a term in State prison if the offender were a civilian. These prisoners are confined in State prisons, arrangements having been made with the State authorities of New Hampshire, Connecticut, Pennsylvania, and California to receive them under certain conditions. These men upon the approval of the adjudged sentence are sent to a naval prison for further transfer to the designated State prison.

(2) *Inmates of naval prisons*.—These are men who are convicted of strictly military offenses. Boys less than 21, men recommended to clemency, and those whose offenses seemed to be more a question of

ignorance than of deliberate intent are sent to disciplinary barracks, as noted in next paragraph. During the year naval prisons have been maintained at Portsmouth, N. H., Boston, Norfolk, Mare Island, Cavite, and on the U. S. S. *Philadelphia*, moored at the naval station, Puget Sound, and on the U. S. S. *Southery*, navy yard, Portsmouth, N. H. The prison at Boston was closed on April 24, 1914, the prisoners being transferred to Portsmouth, N. H. The men confined in these prisons wear prison garb and perform hard labor. Men sent to a naval prison may, in accordance with prison regulations, be recommended for transfer to a disciplinary barracks after serving six months of their sentences with good conduct, and, if their past service records seem to warrant the belief that they are desirable for eventual restoration to duty, and sufficient time remains in their current enlistments, they are sent to a disciplinary barracks with a view to permitting them, by their own good conduct, to earn their restoration to duty and avoid the stigma of a dishonorable discharge.

(3) *Detentioners*.—These are the men confined at a disciplinary barracks. As above stated, they consist of two general classes, viz:

(a) Those committed direct to the barracks: These are the very young men, those with less serious offenses and whose term of enlistment permits them to serve through their sentences with sufficient time to justify their restoration to duty if conduct warrants it.

(b) Those who are first committed to a naval prison, but whose conduct and past record warrant the belief that they may be deserving of another chance, and who are accordingly transferred to a disciplinary barracks, as explained above.

Detentioners wear the regular naval uniform, and instead of being required to perform hard labor are given a thorough course of drills and instruction with a view to better fitting them for the duties of their ratings should they earn their restoration to duty. Men whose conduct is satisfactory are kept in strict detention until they have completed two-thirds of their adjudged terms and are then placed on probation at the disciplinary barracks for the remaining third of their terms. In this status they receive pay, liberty, etc., and are in all respects in the same status as enlisted men in good standing in the service at large, except that if, during the probationary period, they commit a serious infraction of the regulations they may be returned to hard labor or to strict detention and be required to serve out the remainder of their sentence or a part thereof. There are two disciplinary barracks, one located at Port Royal, S. C., the other at the naval station, Puget Sound, Wash. On April 25, 1914, owing to the necessity of service in Mexico, the barracks at Puget Sound was closed, and the men in detention were transferred to the U. S. S. *Philadelphia*, where the detention system has since been maintained. The above system is based on modern ideas of penology and places it within the reach of all whose term of enlistment permits to earn a remission of the dishonorable discharge and a rehabilitation in the service by their own good conduct.

RESULTS OBTAINED FROM DETENTION SYSTEM.

In order to ascertain what actual results were being obtained from the system, soon after my appointment I traced the subsequent history of every man who had passed through the disciplinary barracks between January 1, 1912, and November 1, 1913.

During this period there were approximately 2,900 total sentences of general courts-martial approved. Of these about 150 were confined for criminal offenses, being sent to State prisons, leaving 2,750 guilty of naval offenses. Of these, 665 underwent confinement in the disciplinary barracks.

Of these 665, 160, or about 25 per cent, were dishonorably discharged pursuant to sentence, not having "made good;" 84 men were dishonorably discharged, but recommended for reenlistment; and 421 were unconditionally restored to duty. Of these 421, 221, or about 50 per cent, were either still in the service in good standing or had received either an honorable discharge or ordinary discharge up to November 1, 1913; as this was for a period of 22 months the 50 per cent represented the loss during a mean period of 11 months following restoration.

It is entirely natural that the percentage of men who after restoration to duty have a creditable record for 11 months will be materially less than after a mean interval of 6 months. In fact the data for a period of one year prior to November 1, 1913 (corresponding to a mean interval of six months), showed that 68 per cent of those restored had "made good."

It is believed that as the service is becoming more familiar with the detention system the products thereof are looked upon with less suspicion and that the percentage which "make good" will be considerably greater than above shown. However, it is believed that the data for the year from July 1, 1913, to June 30, 1914, is misleading because of the fact that about 500 men were restored to the service either on probation or unconditionally about April 26; not only was the large proportion under test only two months and four days, but also they were immediately sent to Mexican waters where little opportunity was afforded for misbehavior.

The following is the summary of the results obtained from those restored to duty from Port Royal between July 1, 1913, and June 30, 1914:

Of the 694 men unconditionally restored to duty and restored to duty on probation from Port Royal 609 are still serving in an honorable status (of whom 14 have reenlisted); 3 have been discharged with honorable discharges; 12 with ordinary discharges; 26 with bad-conduct discharges pursuant to sentence of summary courts-martial; 3 have died; 4 have been dishonorably discharged; 5 have been discharged as undesirable (due to inaptitude or physical disability); 9 have been returned to hard labor for offenses committed while in the disciplinary barracks; and 23 have deserted. Thus it will be seen that of the 694 men restored to duty 624, or about 89.6 per cent, may be considered as having "made good" up to the date of the end of the period covered by this report. Owing to the large number restored to duty on April 26, this represents a mean period of about four months.

The Puget Sound annual report for the fiscal year 1914 shows that 360 men (including one detentioner recaptured) have been handled during the fiscal year. Of this number 157 have been restored to duty unconditionally; 41 were discharged; 32 returned to confinement at hard labor for offenses committed while in the disci-

plinary barracks; 17 deserted; 1 died; and 112 were in detention on June 30, 1914. Of the 157 men unconditionally restored to duty in the service at large 118 are still serving in an honorable status; 10 have been discharged with an ordinary discharge; 13 have been discharged with a bad-conduct discharge pursuant to the sentence of summary courts-martial; 2 have died; 10 have deserted; and 4 have been discharged as undesirable (cases of inaptitude or physical disability). Thus it will be seen that of the 157 men returned to duty in the service at large 130, or about 83 per cent, may be considered as having "made good" up to the date of the end of the period covered by this report.

From the above it seems fair to conclude that 60 per cent of the men restored to duty will, at the end of one year from the date of restoration, be in the service in good standing or will have received an honorable or an ordinary discharge on expiration of enlistment. From a financial viewpoint the system is expensive. As a humanitarian system it is excellent, in that it requires a recalcitrant to work for his rehabilitation, and on discharge he is a better and more useful man than when he entered the service, and by virtue of having accomplished his own redemption he is a stronger and more capable self-reliant man.

The results justify the continuance of the system, but at the same time point out the necessity of economy. The plan for a great reduction in expense of this item will be suggested below.

An examination of the total shows that of the various offenses charged against naval prisoners 80 per cent involve desertion or absence over leave, either alone or together with other offenses. About 15 per cent involve, among other offenses, that of fraudulent enlistment. Besides this it has been found that about the same proportion of minor courts and minor punishments involve unauthorized absence. It is believed that deliberate overstaying of leave has the most pernicious effect upon naval discipline; also the punishments habitually administered do not seem to reduce it. Imprisonment is undesirable for many reasons, and loss of all pay for prolonged periods is liable to lead to other offenses even more serious in nature. For these reasons General Order 110 has been approved by you, which will, it is believed, greatly promote the discipline of the service. In general, this order substitutes loss of half pay and bad conduct discharge at discretion of commanding officer for many of the cases of absence over leave which now involve imprisonment. With this order in operation, and if the regulations be made more liberal in so far as the offer of reward for deserters is concerned (as to which I have heretofore submitted a separate recommendation), so that men will feel assured of being captured and imprisoned if they continue in desertion, and that they will be either placed on half pay or be discharged if they return voluntarily, it is believed desertion and absence over leave will be greatly reduced, discipline will be better, and the attitude that we do not want men in the service who can not obey will improve the morale of the service. This scheme should greatly decrease the number of prisoners without, it is believed, increasing our total loss of men to the service.

REDUCTION OF PRISONS RECOMMENDED.

When this order shall have become operative throughout the service, one naval prison on each coast should be sufficient. It is recommended that Portsmouth and Mare Island be the two prisons. Since the disciplinary barracks at Puget Sound was shifted from ashore to the U. S. S. *Philadelphia*, it has been strongly represented by officers attached thereto and familiar with both systems that ships are more suitable for that purpose than barracks ashore. It is, of course, the object to restore to the service all men who are sent to the disciplinary barracks—no man is ordinarily sent there unless he gives promise of being desirable for retention. Therefore instructions in ship life are desirable. For that reason the U. S. S. *Philadelphia* should be made the permanent quarters of the detentioners on the west coast. Under the proposed scheme the number of men sent directly to detention will be greatly reduced; the detentioners will be, generally speaking, those men who, having shown aptitude and reform in prison, have had their sentences mitigated to detention. Sending these men long distances under guard involves considerable expense, and returning them to prison when they show themselves unworthy involves more. Therefore the U. S. S. *Philadelphia* should be taken to Mare Island, where these transfers could be effected without expense.

For the same reason it is proposed to use the *Topeka* at the navy yard, Portsmouth, for the east coast detentioners. With this system there will be a prison at one navy yard on each coast, with a detention ship at the same yard.

Under the provisions of General Order 110 there will be the following classes of men sentenced to imprisonment:

1. Criminals: To State prisons, as at present.
2. Fraudulent enlisters: Undesirable by their records.
3. Deserters: Who are apprehended and delivered.
4. Deserters or stragglers: Who surrender, but who have less than 12 months to serve on current enlistment.
5. Serious military offenders.

Of these, classes 1 and 2 are manifestly undesirable for the service and will not become available for the detention system.

Class 3 will furnish but few detentioners, as they are probably not desirous of remaining in the service. However, some will be less than 22 years old and will be sent to the detention ship direct.

Class 4, owing to the expiration of their enlistment in the majority of cases before term of confinement expires, will furnish few men to the detention ship.

Class 5 are of all ages, and these men are frequently desirable for retention. A considerable number of these men would probably be desirable for assignment to detention.

It is further recommended that, having established the prisons at Portsmouth and Mare Island, with a detention ship at each of these places, the following instructions be promulgated to render the rehabilitation of deserving naval prisoners general in scope and automatic in operation:

- (1) Criminals: To be sent to State prisons, as at present, retaining naval prisons exclusively for military offenders.

(2) Military offenders: Those less than 22 years of age to be sent to detention ships direct unless expiration of term of enlistment or past record renders them undesirable for retention in the service, in which case they will be sent to naval prisons. Those 22 years of age and above to be sent to naval prisons.

(3) The undesirables: Will be required to serve their sentences at hard labor, subject to existing prison rules, and discharged from the naval prison at the expiration of their sentences in accordance with the terms thereof.

(4) Desirables: Those sent to naval prisons whose expiration of term of enlistment does not forbid or whose record does not render them manifestly undesirable for retention, to undergo one-third of their approved sentences in the naval prison; then, if conduct warrants, to be transferred on recommendation of the commanding officer of the naval prison, approved by the department, to the detention ship.

(5) Second-class detentioners: Those sent to the disciplinary ships, whether direct or from the prison, will, upon arrival, be clothed in the regulation uniform and will be regarded and treated as detentioners now are and will be known as "second-class detentioners" until one-half of their adjudged term of confinement (or a greater period of time if considered desirable by the commanding officer of the detention ship) has been served.

(6) First-class detentioners: After men have served one-half of their adjudged sentences they will, at the discretion of the commanding officer of the detention ship, be advanced to first class. This class will correspond to the present "detentioners on probation" and will be known as "first-class detentioners." As such they will receive the full pay of their rating and will be allowed all benefits and privileges of men in the regular service.

(7) After a man has completed two-thirds of his sentence with an excellent record, he will be either discharged, pursuant to his sentence, or will be unconditionally restored to duty in the service at large, as the circumstances, including physical condition and professional attainments, warrant.

(8) No prisoner will be transferred from a naval prison to a detention ship, nor from the status of second-class detentioner to first-class detentioner (probationer), unless, in the opinion of his commanding officer, he gives promise of being desirable for restoration to the service both physically and professionally, and unless he personally desires this opportunity to effect his rehabilitation.

(9) Any man in the detention ship may, at the discretion of the commanding officer, be returned to hard labor if conduct or aptitude is such as to warrant the belief that he will not prove desirable, whether he was sent to detention direct or from a naval prison. Any first-class detentioner may be reduced to second class at the discretion of the commanding officer of the detention ship for bad conduct or inaptitude. In case a man is returned from detention to hard labor, the term served as first-class detentioner will be considered a portion of the one-third allowance for good conduct, the two-thirds sentence being additional thereto; but time served as second-class detentioner will count in all respects as if it had been at hard labor.

It is believed that the above consolidation of prisons and detention systems will prove superior in many ways. It will render the

entire system automatic, providing a means for all desirables to effect their own rehabilitation, whether sent to prison or to detention direct, and by closing the present disciplinary barracks will, while improving the training, effect a saving of at least \$500,000 annually.

RECOMMENDATIONS.

In addition to the above radical changes, it is recommended:

(1) That each prison and detention ship have a regularly assigned and specially selected chaplain.

(2) That prisoners be utilized to perform more useful labor in the future than in the past.

(3) That those men who have had their pay remitted, due to the destitution of their families, be required to do eight hours of remunerative Government work per day.

(4) Though interested parties at times take steps to prevent the utilization of prison labor for remunerative purposes, it must be remembered that naval prisoners are regularly enlisted men undergoing punishment. It is therefore recommended that they be freely used to perform any appropriate labor performed by enlisted men at a navy yard, such as coaling ships, chipping bottoms, handling lines or stores, or any duty for which a ship's working party would normally be used.

II.

OFFICERS' RECORDS.

Under this heading may be grouped the convening and dissolving of examining boards for admission, promotion, and retirement, and the review and filing of all records relating to same. There follows a tabular list of the operations of this office in these particulars during the year:

EXAMINING BOARDS.

Officers of the Navy:	
Records revised.....	251
Failed professionally.....	3
Failed professionally and morally.....	1
Failed physically.....	18
Action on cases suspended.....	10
Disapproved.....	3
Action on suspended cases taken.....	7
Qualified for promotion.....	216
Officers of the Marine Corps:	
Records revised.....	13
Failed professionally.....	1
Failed physically.....	1
Qualified for promotion.....	11

RETIRING BOARDS.

Officers of the Navy.....	55
Officers of the Marine Corps.....	5
Total.....	60

EXAMINING BOARDS OF CANDIDATES FOR ADMISSION TO THE NAVY AND MARINE CORPS AS OFFICERS.

Line:	
Examined.....	6
Failed professionally.....	1
Passed and appointed.....	5
Medical Corps:	
Examined.....	42
Failed professionally.....	10
Failed physically.....	1
Action indefinitely postponed.....	1
Passed and appointed.....	20

Medical Reserve Corps:	
Examined.....	140
Failed professionally.....	21
Failed physically.....	36
Withdrew.....	19
Passed and appointed.....	71
Dental Corps:	
Examined.....	8
Failed professionally.....	1
Failed physically.....	2
Passed and appointed.....	5
Dental Reserve Corps:	
Examined.....	13
Failed professionally.....	3
Failed physically.....	1
Withdrew.....	1
Passed and appointed.....	8
Pay Corps:	
Examined.....	62
Failed professionally and physically.....	13
Failed professionally.....	38
Failed physically.....	3
Failed professionally and morally.....	1
Passed and appointed.....	7
Chaplains:	
Examined.....	1
Passed and appointed.....	1
Professors of Mathematics:	
Examined.....	6
Failed physically.....	4
Passed and appointed.....	2
Marine Corps:	
Examined.....	65
Passed and appointed.....	21

RECORDS REVISED.

Examinations for promotion, Navy and Marine Corps.....	264
Examinations for retirement, Navy and Marine Corps.....	80
Examinations for admission, Navy and Marine Corps.....	343
Grand total.....	667

PHYSICAL DEFECTS OF WARRANT OFFICERS.

In connection with the examinations which have been held, I desire to invite your attention to the very large percentage of warrant officers who either fail physically when they come up for promotion to commissioned warrant officers after six years' service as warrant officers, or who break down physically and are ordered before retiring boards prior to having finished six years of service in the warrant grades.

Owing to the abnormal proportion found incapacitated, this subject merits attention. These officers are, without exception, of an age where they should be physically in the prime of life and their life has not been appreciably harder than that of commissioned officers. The hypothesis therefore suggests itself as reasonable that the cause lies in the fact that their physical examinations for appointment as warrant officers are not as strict as those for promotion to commissioned warrant officers.

The examinations for appointment as warrant officers do not fall under the cognizance of this office, but, owing to this large percentage of failure and the consequent burden to the retired list, attention is invited to the necessity of a very thorough physical examination prior to appointment as warrant officers. In this connection, it was noted that of 62 candidates amongst the enlisted personnel of the Navy who took the examination for appointment as assistant paymaster, 15, or 24.2 per cent, failed physically. As these were all from the enlisted personnel of the Navy, and were young men (less than 26 years of age), this is an indication that the physical standard for

enlisted men is not up to that for officers. Consequently, when a petty officer is advanced to warrant rank, he should, in view of his privilege of retirement, be subjected to an examination in all respects as rigorous as when he comes up for appointment to commissioned rank, because, if he fails on the latter examination, on account of physical disability in line of duty, he must nevertheless be retired with commissioned rank.

The following figures show the abnormal proportion of physical failures of warrant officers coming up for promotion to the grades of chief:

Percentage who failed physically.....	34.7
Percentage who were retired.....	30.8

The following figures give the same data for all commissioned officers of the Navy examined for promotion during the same period:

Percentage who failed physically.....	5.63
Percentage who were retired.....	8.03

WAIVING PHYSICAL DEFECTS.

I also desire to invite attention to the frequency with which physical defects, which are waived when an officer first receives a commission or warrant, on account of not then being serious, later develop and result in early retirement. These defects relate not only to eyesight and hearing, but not infrequently to organic troubles barely apparent on appointment, and develop rapidly causing retirement in line of duty after only a few years service. It is recommended that physical defects on entrance to the list of officers in no case be waived. An ample number of physically sound applicants are available for all positions, and waived defects too frequently cause retirement comparatively early in life.

III.

LEGISLATION.

There follows in tabular form a statement of the Senate and House bills, joint resolutions, and proposed amendments referred to the department for recommendation. In view of the fact that the report of my predecessor, under this heading, included legislation up to November 1, 1913, this table covers only from November 1, 1913, to June 30, 1914.

Senate and House bills, joint resolutions, and proposed amendments referred to the department for recommendation, etc.

Senate bills, etc.:

Private—

Favorable action recommended.....	1
Unfavorable action recommended.....	22
Answered without recommendation.....	2
Not finally disposed of.....	1

Total.....26

Public—

Favorable action recommended.....	1
Unfavorable action recommended.....	2
Answered, recommending no action at present.....	1
Not finally disposed of.....	2

Total.....6

Total Senate bills, etc., referred.....32

House bills, etc.:

Private—

Favorable action recommended.....	4
Unfavorable action recommended.....	23
Answered without recommendation.....	4
Not finally disposed of.....	1

Total.....32

Public—

Favorable action recommended.....	3
Unfavorable action recommended.....	4
Answered without recommendation.....	1
Answered, legislation suggested not necessary.....	1
Not finally disposed of.....	1

Total.....10

Total House bills, etc., referred.....42

Statutes, etc., drafted:

Public bills or amendments thereto drafted and submitted to Congress.....16

The following legislation, recommended or approved by the department, has been enacted since November 1, 1913:

S. 3997. To waive for one year the age limit for the appointment as assistant paymaster in the United States Navy in the case of Landsman for Electrician Richard O. Reed, United States Navy. (Approved May 9, 1914.)

S. 5445. An act for the relief of Gordon W. Nelson. (Approved, May 9, 1914; authorizes the commissioning of Gordon W. Nelson, an alien, as an ensign in the Navy on the date of his graduation from the Naval Academy, and provides further that his commission shall be forfeited on January 1, 1915, unless he becomes a citizen of the United States on or before that date.)

S. 5552. To amend an act entitled "An act for the relief of Gordon W. Nelson," approved May 9, 1914. (Approved, May 21, 1914; amends the above act by extending the time within which Gordon W. Nelson is required to become a citizen of the United States to July 1, 1915.)

H. R. 8667. To promote the efficiency of the Naval Militia, and for other purposes. (Approved, February 16, 1914; provides for the reorganization of the Naval Militia, for their equipment, drills, inspection, and service with the Navy in time of peace, and for their muster into the Federal service in time of war.)

H. R. 10081. To make the tenure of the office of the Major General Commandant of the Marine Corps for a term of four years. (Approved, December 19, 1913; provides that hereafter vacancies in the position of Commandant of the Marine Corps may be filled by the appointment of an officer of the Marine Corps on the active list not below the grade of field officer, who shall hold office for a term of four years; and that at the expiration of his term as commandant, the officer so appointed will be returned to duty in his grade.)

The naval appropriation act, approved June 30, 1914 (H. R. 14034), contains the following new legislation relating to the personnel:

Naturalization of aliens serving in the Navy or Marine Corps.

Clothing outfit, amount not drawn on first enlistment may be issued on second enlistment, the net cost to the Government in any case not to exceed \$60.

Acting chaplain; creates the grade of, and authorizes appointments to. Increases the total number of officers in the Corps of Chaplains to 1 for each 1,250 of the total personnel of the Navy and Marine Corps. Provides for the distribution in rank of acting chaplains and chaplains, promotion, etc.

Additional midshipmen at the Naval Academy; authorizes the Secretary of the Navy to make 15 appointments annually from enlisted men of the Navy not more than 20 years of age who have not less than one year's service and who successfully undergo a competitive examination.

Mileage not to be paid to any officer where Government transportation is furnished.

The following bills relating to the personnel, which were referred to the department for comment by Congress, have been recommended by the department for favorable consideration, but have not as yet become law:

S. 196. For the reinstatement of Lieut. Col. Constantine Marrast Perkins to the active list of the Marine Corps.

S. 3525. For the relief of Pay Inspector F. T. Arma, United States Navy.

H. R. 4232. To amend section 1440 of the Revised Statutes of the United States.

H. R. 4397. To provide that petty officers, noncommissioned officers, and enlisted men of the United States Navy and Marine Corps on the retired list who had creditable Civil War service shall receive the rank or rating and the pay of the next higher enlisted grade.

H. R. 7194. For the relief of Acting Asst. Surg. Elwin Carlton Taylor, United States Navy.

H. R. 7772. To make the appointment of pay clerks in the United States Navy permanent, under regulations established by the Navy Department for other warrant officers, and to create the grade of chief pay clerk

H. R. 8198. For the relief of Loren W. Greeno.

H. R. 12161. To remove the charge of desertion against John Mitchell. (Recommended with amendment.)

H. R. 16823. To appoint Frederick H. Lemly a passed assistant paymaster on the active list of the United States Navy.

The department, on its initiative, has recommended legislation on the following subjects:

Chief carpenters and carpenters; eligible for appointment as ensigns, subject to examinations now required by law in the cases of chief boatswains and boatswains.

Vice admiral, creating the grade of, and authorizing the appointment of six officers with that rank.

Retired pay; graded retired pay, employment of certain retired officers on active duty, etc.

Administration of justice in the Navy, to promote. (S. 4864.)

Forfeiture of pay while absent from duty due to misconduct.

Gratuity; amendment of the act of August 22, 1912, relative to the payment of six months' pay to the widow, etc., of an officer or enlisted man of the Navy or Marine Corps whose death occurred while on the active list and was not due to his own misconduct.

Nicaraguan expedition; members of, authorized to wear distinctive badge. (H. J. Res. 290.)

Medals of honor, to secure uniformity in the award of; rewards for distinguished service in the Army, Navy, and Marine Corps. (S. 5963.)

In addition to the above legislation which the department desires to see enacted, a further study of the laws relating to the Dental Corps and Dental Reserve Corps of the Navy may develop the necessity of additional legislation in reference thereto.

Section 1624 of the Revised Statutes (Articles for the Government of the Navy of the United States), is in many respects obsolete, and many of the requirements of that section, due to change in conditions, do not now mean what they formerly did. This section requires thorough and careful revision.

Legislation amending the act of March 3, 1909, relative to the administration of oaths by certain officers of the Navy and Marine Corps, is desirable.

IV.

MISCELLANEOUS.

Under this heading may be grouped duties relating to comptroller's decisions, correspondence relating to the removal of the charge of desertion, the issuance of certificates of discharges in true name, pardons, and questions and subjects of various nature.

The following table shows the operations of this office under these headings:

DECISIONS OF THE COMPTROLLER OF THE TREASURY.

Requests for, by disbursing officers, etc.	145
Referred to the comptroller.	118
Answered by the department.	27

CIVIL WAR CASES.

Requests for removal of charge of desertion.....	27
Granted.....	11
Not granted.....	16
Requests for information relative to removal of charge.....	13
Inquiries as to whether service was honorable.....	15
Requests for certificates of discharge, discharges in true name, etc.....	12

PARDONS.

Requests for Executive pardons.....	37
Granted.....	12
Not granted.....	26
Requests for information concerning Executive pardons.....	10

V.

LEGAL QUESTIONS.

Aside from the legal questions which arise continually in connection with every branch of work in this office, all of which require a thorough knowledge of the laws and precedents relating thereto, there are numerous and varied questions arising elsewhere in the administration of the Navy and Marine Corps which are referred to this office for an opinion. The solution of these legal problems requires on the part of all officers on duty in this office a knowledge of laws, decisions, and precedents covering a wide field. In order to equip them for work of this varied and technical character, my predecessor established the custom of requiring all officers assigned to duty in this office to take a course of law in one of the universities in this city. This requirement, with which I am in hearty accord, should be continued, for only in this way will this office be supplied with officers possessing the requisite knowledge of law, and the service with officers competent to prosecute important cases ashore and afloat.

During the past year, two officers received the degree of LL. B., and one other officer would have completed his course but for the necessity of ordering him to Mexico. I believe that these officers and those who afterwards successfully complete the required course of study, should be treated as specialists, if they so elect, in all respects as are those who take post-graduate courses in engineering and ordnance. In other words, the Navy requires the services of a few officers who are good lawyers; officers who have added to their technical naval knowledge a special understanding of the law, both military, civil, and international. If they are to become and continue to be good lawyers, naval officers, like civilians, must make the study and practice of law their paramount work. In order to perfect this knowledge and in order that the Navy may obtain the maximum benefit from their services, they should be assigned to duty in this office when they become due for shore duty, and, when at sea, to duty in the line of their specialty. They will be of especial value on the staff of each commander in chief as aids in the preparation of legal papers originating with such officer, and to detect errors in the proceedings of courts which are not now discovered in many cases until the proceedings have reached a point where corrections can not be made. Certain of these officers should be thorough students of international law and their advice and opinions on this subject will make them doubly valuable to the service

whether afloat or ashore. In order to accomplish this it is recommended that officers who have completed the course of law as above described, on their next tour of shore duty take a special course in international law.

If these officers devote the time necessary to familiarize themselves with this diverse and exacting work, and the naval service is benefited thereby, as I believe it will be, some provision should be made for their advancement without detriment because of the fact that they have not been able to bestow the usual amount of time on strictly professional naval subjects. The Army accomplishes this end by means of a separate Corps of Judge Advocates. As long as existing laws relating to promotion are in operation, I consider a separate corps unnecessary and not in accord with the general thought of the Navy, but the same end may be accomplished by regarding the graduate students of law as specialists to the same extent as engineer and ordnance specialists.

My experience in the service prior to my appointment as Judge Advocate General as well as my experience in this office impresses upon me the fact that the service is deficient in reference books and authoritative publications regarding naval law, precedents, and decisions. Practically all law books available for reference of courts-martial are Army publications which are necessarily based on Articles of War, which differ so much from the Articles for the Government of the Navy, as in some cases to render the reference books based thereon misleading to a naval court. In other words, though the laws of evidence are the same for both military and naval courts, the actual fundamental articles which form the basis of Army law and Navy law respectively, differ widely. The court-martial orders published for many years past contain department decisions and precedents on various matters of law, all of which have at the time been carefully and thoroughly considered, and these decisions are in effect, so far as the service is concerned, our present naval law.

I began, and am continuing, in so far as circumstances permit, a careful card index of all of these decisions with a view to their publication as a digest. This work has been seriously interrupted owing to conditions in the south, depriving the office of some of its officers.

A compilation of naval laws, annotated, is now in the course of preparation by the law clerk in this office. This book will, it is believed, be of the very greatest value, as it will contain the naval laws with their amendments, and the decisions and interpretations which have been placed upon them.

The edition of Forms of Procedure for Courts and Boards in the Navy and Marine Corps is now sufficiently approaching depletion to warrant the beginning of an extensive revision of this book. It is hoped that officers will soon be available to continue the above-mentioned very essential work, and that the officers of the service will cooperate by forwarding all possible suggestions and questions as to matters which to them do not appear clearly covered in the present edition.

RIDLEY McLEAN.

REPORT OF THE CHIEF OF BUREAU OF YARDS AND DOCKS.

DEPARTMENT OF THE NAVY,
BUREAU OF YARDS AND DOCKS,
Washington, D. C., October 1, 1914.

To: Secretary of the Navy.

Subject: Report of operations of the Bureau of Yards and Docks
for the fiscal year 1914.

The cost of the work performed during the fiscal year 1914 from appropriations under the cognizance of the bureau aggregated \$5,529,167.25, divided as follows: Public works, \$3,173,721.64; maintenance of yards and stations, \$1,525,808.36; repairs and preservation at navy yards and stations, \$801,873.45; contingent, \$27,763.80.

The expenditures of funds under the cognizance of other bureaus and the Marine Corps, but supervised by this bureau, were as follows: "Depots for coal," \$524,540.75; "Coal and transportation," \$228,366.23; "Equipment of vessels," \$126,471.98; Bureau of Medicine and Surgery, \$132,814.84; Bureau of Navigation, \$15,338.56; Marine Corps, \$41,594.45. Under appropriation "High-power radio stations" the expenditures amounted to \$80,522.59.

The total cost of the work performed during the fiscal year under the supervision of the Bureau of Yards and Docks amounted to \$6,678,816.65. There were 90 public-works contracts awarded by the department during the year, involving obligations amounting to \$2,518,957.90.

DRY DOCKS.

No dry docks were begun or completed during the fiscal year. The only work of this nature now uncompleted is the dry dock at Pearl Harbor, work on which was completely suspended during the fiscal year.

POWER PLANTS.

The principal power-plant projects had been completed at the beginning of the fiscal year. The power plants at Pearl Harbor and Guantanamo were completed in essential particulars early in the year. At the close of the fiscal year the new power plant at the naval torpedo station, Newport, R. I., had been completed, with the exception of minor details. The heating plants for the naval hospitals at Chelsea, Mass., and Newport, R. I., were under construction. The work at Newport was considerably further advanced than the work at Chelsea, due to contracts having been awarded earlier for the work at Newport.

The bureau has given special attention during the year to providing suitable measuring devices at the various power plants, to

enable the keeping of a more accurate record of the performance of each plant, which makes it possible to detect a deficiency and to apply the necessary remedy. A system of periodical reports has been inaugurated by which accurate comparisons can be made and the benefit of the experience at one point placed at the disposal of those in charge of other plants. By this educational system it is hoped that the utmost efficiency may be maintained among the attendants on these plants, and heat, light, and power produced at a minimum expenditure.

PEARL HARBOR.

The upbuilding of this station, with the exception of the dry dock, has gone steadily forward according to the approved general plan. The officials and administrative force have moved from Honolulu to the station and occupied offices and quarters completed near the end of the fiscal year. A number of shop buildings and storehouses have also been completed and are ready for occupancy. Information in detail concerning works completed and under way during the year is given under the head of "Report of operations."

GUANTANAMO.

The emergency repair installation, including power plant, shop buildings, office buildings, quarters, etc., was completed during the year. The only important items remaining to be completed were the marine railway and the installation of machine tools in shop buildings. The work on both of these projects was well advanced at the close of the fiscal year. The work at the fuel-oil plant reported as authorized or uncompleted in the last annual report was completed during the fiscal year. At the radio station the steel towers and operating buildings were completed. All of the work appropriated for at the naval magazine was completed.

PUBLIC WORKS, BUREAU OF MEDICINE AND SURGERY.

The construction of buildings for the naval hospital at Pearl Harbor was carried on during the year and is now progressing rapidly. The present contract price for these buildings is \$130,016.29. The work was about 65 per cent completed at the close of the year.

Other work performed by this bureau for the Bureau of Medicine and Surgery was on the heating plants at Chelsea and Newport and miscellaneous items in the nature of minor improvements, such as the installation of sterilizing equipment, window screens, metal weather strips, etc., at naval hospitals. The detailed statement of operations will show the extent of practically all hospital work completed or under way during the year.

PUBLIC WORKS, MARINE CORPS.

The barracks and quarters at Pearl Harbor were completed during the early part of the fiscal year. The new barracks at Philadelphia were nearing completion. A set of bachelor quarters for eight officers at Puget Sound was about half completed. Many minor improvements were effected at the various marine barracks under the supervision of the bureau.

PUBLIC WORKS, BUREAU OF ORDNANCE.

The work coming under this head represents the operations at the various naval magazines, the Naval Torpedo Station, Newport, R. I., and the Naval Proving Ground, Indianhead, Md. As these public works have been appropriated for under the Bureau of Yards and Docks, beginning with the fiscal year 1912, a large share of the bureau's annual operations is involved in ordnance constructions. The value of the work completed during the year was approximately \$550,000. The value of work under way at the close of the fiscal year was in the neighborhood of \$375,000. Work in view amounts to over \$500,000.

RADIO STATIONS.

Work was actively prosecuted during the fiscal year on the high-power radio station in the Canal Zone. Erection of the towers was commenced toward the close of the fiscal year. Buildings in connection with this station were either completed or well under way. With the exception of the erection of the towers all work is being performed by the Panama Canal force. Contracts were executed during the year for towers for the secondary stations at Balboa and Colon, but no great amount of work had been performed at the site of either station.

Two 300-foot towers were erected at San Juan, P. R., and a power house was completed at Jupiter, Fla.

Contracts were awarded near the close of the fiscal year for two 300-foot towers at Chelsea, Mass.; two 400-foot towers and a building at the Naval Training Station, Great Lakes; one 200-foot tower at Beaufort, N. C.; three 300-foot towers at Key West, Fla.; two 300-foot towers and a building at New Orleans, La.; operators' quarters, Tatoosh Island, Wash., and two 300-foot towers at the navy yard, Washington, D. C.

COAL-STORAGE PLANTS.

Considerable progress was made on the large coaling plant at Pearl Harbor. Several contracts covering the purchase of locomotive cranes, dump cars, etc., were completed. The construction of the basin and wharf by station force was progressing favorably. Contract was let for the purchase of structural steel for coaling-plant trestles, etc., as well as a contract covering the erection of this steel. The material has not as yet been delivered at the station.

FUEL-OIL AND GASOLINE STORAGE PLANTS.

During the fiscal year the first 7,000-ton fuel-oil storage tank at the Boston Navy Yard and the additional 7,000-ton fuel-oil tank for Pearl Harbor, authorized in the act of March 4, 1913, were completed. The second 2,500-ton tank at Norfolk was made ready for service, bringing the total storage capacity installed at the various fuel-oil and gasoline storage stations to 90,000 tons of fuel oil and 630,000 gallons of gasoline. The act of June 30, 1914, provides for the establishment of new fuel-oil stations at San Diego, Cal., Mare

Island, Cal., and Puget Sound, Wash., as well as for increases in the existing plants at Melville, R. I., and Norfolk, Va. This will increase the total fuel-oil storage by 63,000 tons. No fuel-oil or gasoline tanks are building and no additional gasoline tanks have been authorized. The following table shows the distribution of fuel-oil and gasoline storage tanks built and authorized.

Place.	Fuel-oil tanks.			Gasoline tanks.	
	Built.	Authorized.	Capacity.	Built.	Storage.
			<i>Tons.</i>		<i>Gallons.</i>
Boston.....	1	.....	7,000	1	90,000
Melville.....	2	.....	5,000	1	90,000
Do.....	.....	1	7,000	.....	.....
Norfolk.....	2	.....	5,000	1	90,000
Do.....	.....	3	21,000	.....	.....
Charleston.....	2	.....	5,000	1	90,000
Key West.....	2	.....	5,000	1	90,000
Guantanamo.....	7	.....	30,000	1	90,000
Pearl Harbor.....	5	.....	33,000	1	90,000
San Diego.....	.....	1	7,000	.....	.....
Mare Island.....	.....	2	14,000	.....	.....
Puget Sound.....	.....	2	14,000	.....	.....
Total built.....	21	.....	90,000	7	630,000
Authorized.....	.....	9	63,000	.....	.....

IMPROVING THE HYDRAULICS OF MARE ISLAND STRAIT.

During the preceding fiscal year work had consisted almost entirely of dike work, the principal item being the extension of long dike No. 12 into San Pablo Bay, other work being minor extensions of spur dikes in Mare Island Strait and minor dredging. At the beginning of the fiscal year 1913 all this work had been practically completed.

In July, 1913, bids for dredging in Mare Island Strait on a yardage basis and providing for a 400-foot channel were received. Under the most advantageous of these bids the work with a 400-foot channel would have cost \$232,000, and with a 600-foot channel, \$280,200. These bids were rejected, and on September 6 other bids on a lump-sum basis were obtained. Award was made, and on November 26 the contractor was ordered to increase the channel width to 600 feet, at a total contract price of \$243,000. The work involved dredging the bar at the entrance to Mare Island Strait, dredging a 600-foot channel from the entrance to a point opposite the navy yard, dredging an anchorage or turning basin at the upper end of the yard, and the removal of Commission Rock. This dredging was begun October 22, 1913, and at the present time is 71 per cent completed.

Other minor work such as dredging and repairs to dikes has been carried on, and the city of Vallejo is carrying on diking work at an estimated cost of \$142,000, in order to retain spoil wasted by the contractor from the channel, thereby reclaiming approximately 150 acres of submerged land on the Vallejo side, to the mutual advantage of the city and of the Government.

Owing to unusually favorable prices obtained, the project is approaching completion at a cost much below the Biddle Board's original estimates, and present conditions indicate that these works,

if properly kept up, will accomplish the result of maintaining deep water in Mare Island Strait. The board's estimate for this work of upkeep was \$70,000 per annum. The total project is estimated as being approximately 81 per cent completed, and the estimated date for completion is September 12, 1915, the contract date for completion of the dredging.

FLOATING CRANES.

The 150-ton floating crane for the naval station, Pearl Harbor, was completed during the early part of the fiscal year. This crane was purchased under a contract which also covered the purchase of a crane of similar capacity for the Boston Navy Yard. The Boston crane was completed about the end of the fiscal year 1913, at a cost of \$294,397.92. The cost of the Pearl Harbor crane was \$334,522. These cranes are identical in construction, the larger cost of the Pearl Harbor crane being due to the isolated location of the station. Bids are now being invited for the floating revolving crane for the navy yard, Norfolk, Va., under the act of June 30, 1914.

"MAINTENANCE" AND "REPAIRS AND PRESERVATION."

The appropriation for the fiscal year 1914 under "Maintenance, Bureau of Yards and Docks," was \$1,500,000, and the appropriation under "Repairs and preservation" was \$800,000. These appropriations, which are relied upon to cover all items of general maintenance and repair at navy yards and stations, have been insufficient to meet the many demands for the upkeep of Government property. The increases in these appropriations have failed to keep pace with the increased value of public works, with the result that in many cases property must be allowed to deteriorate for want of adequate funds for repairs.

"CONTINGENT, BUREAU OF YARDS AND DOCKS."

The appropriation "Contingent, Bureau of Yards and Docks," for the fiscal year 1914 was \$30,000. Because of the smallness of this appropriation its use was confined to the most urgent items of an unforeseen character. The inadequacy of the appropriation has long been known, and for the fiscal year 1915 the appropriation is \$50,000, with the wording extended so as to provide for minor extensions and improvements to public works.

REPORT IN DETAIL OF OPERATIONS.

The construction work under the cognizance or supervision of the Bureau of Yards and Docks completed or under way at the end of the fiscal year 1914 may be described as follows. This does not take into consideration the innumerable small jobs, which, however, in the aggregate entailed the expenditure of a considerable amount of money.

Annapolis, Md.—At the close of the fiscal year the underground electric distribution system at the Naval Academy was practically completed, at a cost of \$56,876.03. A bulkhead and wharf were com-

pleted at the rifle range at a cost of \$7,445.30. A timber bulkhead was completed at the Naval Academy at a cost of \$3,181.10.

The work under way at the close of the fiscal year may be summarized as follows: Reinforced-concrete wharf at the Naval Academy, to cost about \$110,000, was well under way; a sea wall at the engineering experiment station, to cost \$42,865, was about half completed; the highway bridge across Dorsey Creek was practically completed, at a cost of \$48,415.82. All of the work mentioned was performed or being performed under contract.

Boston, Mass.—The most important of the work completed at this yard was as follows: Officers' quarters, \$11,261.98; monitor for building No. 8, \$3,881; steel fuel-oil tank, \$15,530; railroad system extension, \$9,535.82.

Reconstruction of building No. 24, under contract, at a cost of \$53,577.27, was well under way. Paving by yard force, at an estimated cost of \$20,000, was about 80 per cent completed. The extension of the electrical system, estimated to cost \$10,000, was over half completed. Remodeling building No. 40, partly by contract and partly by yard labor, at an estimated cost of \$12,000, was about half completed. Remodeling building No. 77 for boat storage, including erection of a traveling crane and crane runways, estimated to cost \$15,000, was under way at the close of the year. Moving boiler shop from building No. 42 to building No. 106, including the necessary modifications in the buildings, estimated to cost \$25,000, was being performed by yard labor and was nearing completion. The excavation, embankment, tank foundation, piping, pump house, and rearrangement of railroad tracks in connection with the erection of the new steel fuel-oil tank, completed, as noted above, was progressing by yard labor. The estimated cost of this work is \$33,000.

Canal Zone.—At the high-power radio station at Caimito the foundations for the radio towers were practically completed. The estimated total cost of the foundations was \$38,000. The erection of the steel towers was commenced toward the close of the fiscal year. These towers are under contract at a cost of \$112,350. In addition to the construction of the foundations for the radio towers by canal force, the following additional work was being prosecuted by the local government: Construction of power house, operating building, and operators' quarters, estimated to cost \$20,000; sewer and water-supply systems for radio station, estimated to cost \$5,000; water supply for temporary work, \$2,500; concrete storehouse, \$1,200.

For the secondary radio stations at Balboa and Colon a contract was let for two towers for each place, the price being \$19,955, but no work had been performed at site at the close of the year. The necessary buildings and other improvements are being undertaken by the canal force. The work on the secondary stations, as a whole, is not very far advanced.

Charleston, S. C.—The work completed during the fiscal year was as follows: Storehouse for oil, \$14,070.88; locomotive and crane shed, \$4,285; purchase of coal car under contract, \$1,995.

The remodeling of the dispensary by yard labor, at an estimated cost of \$3,000, was nearly completed. The construction of torpedo-boat berths by contract, to cost \$284,230, was about one-fourth completed at the close of the year.

Chelsea, Mass.—At the naval hospital at this place the following minor contract work was completed during the fiscal year: Sterilizing equipment, \$999.50; window screens, \$1,615.23; window guards and cell door screens, \$1,528.43; metal weather strips, \$942.66; fire-protection system, \$3,607.

Other contract work was progressing as follows: Roadways, estimated cost \$17,500, nearly completed; electric distributing system, contract price \$5,167.10, 85 per cent completed; refrigerating equipment, to cost \$5,781.91, 70 per cent completed; underground electric transmission system for bringing power from the navy yard, Boston, to cost \$8,503, was well under way. A building for the new heating plant was progressing rapidly by Government labor, and was about 36 per cent completed at the close of the year; the present estimated cost of this work is \$19,920. A contract was awarded near the close of the year for a heating and pumping plant and distributing systems, to cost \$37,257. A contract was let for two 300-foot radio towers, to cost \$9,490, but no work was performed at site. The Government undertook the construction of the foundations for these towers at an estimated cost of \$1,200. Work on the foundations was under way at the close of the fiscal year.

Fort Lafayette, N. Y.—No work coming under the bureau's cognizance or supervision was completed at this magazine during the fiscal year, but the following work was under way at the close of the year: Extension of wharf, \$6,000, was being started; dredging by contract, estimated cost \$15,000, was about 35 per cent completed.

Fort Mifflin, Pa.—Several important pieces of work were completed during the fiscal year at this magazine. The extension of the electric and telephone service from Philadelphia to the magazine was completed at a cost of \$11,997.64. Other smaller jobs which were completed are as follows: Tanks for rain water, \$2,000; filling house for explosive "D," \$996.84; surveillance test house, \$1,997.30; magazine for explosive "D," \$4,483.50; magazine for internal segregated smokeless powder, \$3,000. The only work remaining uncompleted at the close of the year was the installation of the electric lighting system, estimated to cost \$8,500. This work, however, was nearing completion.

Island of Guam.—The only work completed at this station during the fiscal year was the construction of a wharf at Piti. This improvement cost \$2,596.07. At the close of the year work was in progress on the extension of the water-supply system, the final cost of which will be about \$25,000. Very little work, however, had been performed.

Guantanamo, Cuba.—The greater part of the work authorized under the appropriation for emergency repair installation was completed. The following work was performed under contract: Sea-water distilling plant, \$17,536; ice-making and refrigerating plant, \$7,977; two generating sets, \$5,196; purchase of structural steel for four shop buildings, \$22,114.70.

The following work was undertaken and completed by station force: Purchase of material (except structural steel) and erection of four shop buildings, \$42,694.98; distributing systems, \$28,172.06; purchase of material and erection of miscellaneous frame buildings, \$64,905.23; installation of power-plant units and piping, \$31,945.48; construction of roads and walks, \$2,000; excavation and fill at new station, \$43,000; erection of stables and barracones, \$2,888.13.

The main objects remaining uncompleted at the close of the fiscal year were as follows: Marine railway, estimated cost \$10,000, about 75 per cent completed; installation of machine tools in machine shop and woodworking shop, estimated to cost \$8,000, about 75 per cent completed.

At the fuel-oil plant five tanks under contract were completed at a cost of \$73,560. The expenditures by station force for foundations, pipe line, etc., in connection with these tanks amounted to \$23,000. There was an expenditure on account of work performed by local force of about \$9,000, covering the erection of earth barriers for fire protection for fuel-oil and gasoline tanks, for earth fill, for pipeline trestles, and for the purchase of submarine cable for power feeders to fuel-oil pump house. There was no work in progress on the fuel-oil plant at the close of the fiscal year.

At the radio station two steel towers were completed by contract at a cost of \$25,878.45. Three buildings, viz, transmitter house, receiving building, and operators' quarters, were also completed by contract at a cost of \$14,645.20. There were miscellaneous small expenditures by station force for accessories for the radio station.

The following work was completed at the naval magazine by Government labor: Magazine building, \$15,000; shell house, \$15,000; one set quarters and office, \$8,500; and construction of wharf, including clearing, grading, and equipment, \$12,500. There was no work of importance remaining uncompleted at the naval magazine at the close of the fiscal year.

Hingham, Mass.—The following work was completed at this magazine: Dredging, \$25,566.36; general magazine building, \$12,350; magazine for smokeless powder, \$16,291.68; railroad track to filling house, \$1,890. The extension of a pier, under contract at \$13,671.88, was about 95 per cent completed at the end of the year.

Indianhead, Md.—During the year the following work was completed by contract: Wharf, approach, and steel framing for a coal-hoisting tower, \$9,079; storehouse for nitrate of soda, \$14,989. The local force completed the following improvements: Construction of diphenylamine mixing house, \$1,400; railroad extension to new nitrating house, \$1,895.39; and construction of one set of double quarters for officers, \$12,000. At the close of the year the following work was under way: Construction of gravity nitrating house, estimated to cost \$15,000, about 70 per cent completed; extension of magazine No. 1, estimated to cost \$10,704.61, about 43 per cent completed. Both of these improvements were being undertaken by the local force.

Iona Island, N. Y.—The completed work here consisted of the construction of two magazine buildings at a cost of \$30,000 by local force; construction of an extension to the shipping house and replanking dock by Government labor at a cost of \$4,750, with the exception of the structural steelwork and fittings, which were furnished under contract at a cost of \$5,220; lunch room and lockers for employees, by local force, at a cost of \$2,000; and construction of a blacksmith shop by local force at a cost of \$2,500. The uncompleted work consisted of the construction of quarters for gunner, which was being undertaken by the local force at an estimated cost of \$6,000. The work was fairly well started by the close of the year.

Key West, Fla.—No work of any magnitude was performed at this station during the year. A number of paving improvements were completed by the station, at a cost of about \$7,300. The transfer and installation of power-plant machinery to and in building No. 21 was practically completed by the local force at the close of the fiscal year. The ultimate estimated cost of this work was \$16,000. A contract was awarded for the construction of three 300-foot radio towers, but no work was actually performed at site. The foundations for these towers were constructed by the station, at a cost of \$3,510.17. The contract price for the towers is \$14,550.

Lake Denmark, N. J.—All of the work which was completed at this magazine during the year was performed by the local force, and consisted of the following improvements: Locomotive house, \$2,500; magazine building, \$15,000; water-pipe mains, \$4,000; and pump house, \$1,000. The fire and boundary wall, estimated to cost \$7,500, was about 50 per cent completed at the close of the year.

Mare Island, Cal.—The most important of the work performed at this yard was as follows: Installation of electric capstans, \$5,920; construction of gunners' quarters, naval magazine, \$5,000; construction of a magazine building, \$8,450; addition to kitchen at marine barracks, \$3,044. The foregoing work was performed by contract. The following work was performed by yard labor: Placing floors in joiner shop and boat shop, \$38,816.79; reinforcement of dikes, \$14,262.60; concrete walks, street and road pavement, \$15,000.

Work not completed at the close of the year was as follows: Dredging by yard force, estimated cost \$29,000, nearly completed; laying terra-cotta sewer pipe, drains, etc., by yard labor, estimated cost \$10,000, about 75 per cent completed; asphaltic macadam pavement at dry docks, building No. 108, etc., being performed by yard labor, at an estimated cost of \$10,000, about half completed; extension of railway system, estimated cost \$5,000, about half completed; purchase and installation of fire pumps under contract, at a cost of \$7,360, no work performed at yard; installation of salt-water mains for fire protection by yard labor, at an estimated cost of \$18,000, completed so far as possible and awaiting delivery of fire pumps to complete installation of the system; extension of underground conduit system by yard labor, at an estimated cost of \$30,000, about two-thirds completed; dredging in Mare Island Strait under contract, at a cost of \$243,000, about half finished; construction of a magazine building, contract price \$11,950, well under way.

New Orleans, La.—No work of importance was performed at this station. Contracts were executed near the end of the fiscal year for two 300-foot steel radio towers, to cost \$9,760, for foundations for these towers, to cost \$2,450, and for a one-story brick building for the radio station, to cost \$5,780.

Newport, R. I.—At the naval hospital a number of minor improvements were completed, as follows: Sterilizing equipment, \$999.50; kitchen equipment, \$3,510.67; window screens, \$1,576.67; window guards and cell-door screens, \$1,458; metal weather strips, \$942.67. Uncompleted work under contract was as follows: Building for heating plant, \$28,492, nearly completed; refrigerating equipment, \$5,872.22, 85 per cent completed; heating-plant equipment and distributing systems, \$36,874.72, 40 per cent completed. In addition to

the uncompleted work under contract, the local force was engaged upon the construction of a wharf for the hospital, at an estimated cost of \$3,500. This work was about 40 per cent completed at the close of the year.

At the torpedo station the new power plant, including building and equipment, was practically completed at the close of the year. Individual items completed during the year were as follows: Foundations for power house, \$11,776.77; power-plant building, \$31,015.88; hot-water heaters, \$2,425; boilers and settings, \$17,698; centrifugal pumps, \$6,559; switchboard and wiring, \$11,736. The power-plant piping system was practically completed at a contract price of \$7,970.94, as was the contract for fuel-oil engines, amounting to \$37,355. The two air compressors under contract, at \$8,565, had been installed, but because of certain defects had not been accepted. The contractor is now engaged upon the correction of these defects. Other work under progress at the torpedo station at the close of the fiscal year was: Construction of two wharves by local force, at an estimated cost of \$10,000, practically completed; construction of a concrete and timber wharf on Rose Island, at a cost of \$8,683, about 45 per cent completed.

At the naval training station a number of objects were completed. The most important were as follows: Extension of the water-supply system, \$12,572; renewals and repairs to administration building, \$18,618; remodeling auditorium, \$9,568; concrete floor, safety treads, etc., Barracks B and C, \$5,365.92; ferry landing, \$4,222.65. The uncompleted work consisted of changes in salt-water suction line, \$2,756.40; replastering in Barracks B, \$2,425.54; underground electric distributing system, \$6,715; purchase and installation of transformers, \$1,425; sea wall and fill, \$4,000.

At the naval coal depot at Melville, a section of sea wall was completed at a cost of \$9,970.08, by contract, as well as a quarters for machinist, also by contract, at a cost of \$4,810.

New York, N. Y.—A number of important pieces of work were completed here. These improvements were as follows: Granite-block paving, \$33,939.15; tracks around Dry Dock No. 4, \$6,200; construction of Piers E and F, \$103,302.11; wood-block paving, \$14,268.96; paving on coaling pier, \$13,649.03; removal of cob dock, \$105,410.54; raising freeboard of floating crane *Hercules*, \$23,770.46. At the close of the year the contract for a 50-ton locomotive crane, costing \$47,950, was practically completed. Aside from this work nothing of importance remained unfinished.

Norfolk, Va.—At the marine barracks the yard force installed a sump pit and sewage-ejecting plant at a cost of \$8,443, defrayed by Marine Corps funds. A section of sea wall was completed by contract at a cost of \$86,069.10. Cable was placed on this sea wall by yard labor at a cost of \$24,298.34 for purchase of material and installing same. The water front was dredged at a cost of \$18,266.86.

At the naval magazine, St. Juliens Creek, two magazine buildings were completed by contract at a cost of \$26,640. Two sets of quarters for magazine attendants were constructed by navy yard force at a cost of \$6,619.10.

The uncompleted work consisted of the erection of light temporary barracks at St. Helena by local force at an estimated cost of

\$14,450, repairs to Dry Dock No. 3, by yard labor, estimated to cost \$10,000, and construction of a new sea wall, the contract price for which is \$81,350. This important work was about 20 per cent completed at the end of the year, and the work was progressing favorably. At the naval hospital refrigerating equipment was being installed by contract, at a cost of \$8,861.29. The work was nearing completion at the close of the year. At the naval magazine a wharf and approach were being constructed by Government labor at a cost of \$37,592.

Olongapo, P. I.—Two sets of quarters for chemist and subinspector were completed at the naval magazine. Renewal of a dock had been commenced. The cost of the quarters was about \$6,000. The estimated cost of the renewal of the dock is \$4,000.

Pearl Harbor, Hawaii.—Many important projects were completed during the year at this station, while many still remained uncompleted. The following tabular statements will show briefly the extent of operations at Pearl Harbor.

Completed work.

Description.	Cost.
Station proper:	
Erection of steel framework, roofing, etc., for 7 industrial buildings.....	\$59,514.70
Painting 7 industrial buildings.....	10,166.76
Construction of general storehouse.....	91,658.03
Construction of administration building.....	52,585.32
Oiled macadam roads.....	30,000.00
Light and electric distributing systems.....	30,000.00
150-ton floating crane.....	334,522.00
Dredging for quay wall.....	92,033.12
4 electric traveling cranes for shop buildings.....	26,065.00
Elevated steel tank for water system.....	13,850.00
8 officer's quarters.....	87,865.56
Air compressor for power plant.....	21,668.25
Turbo-alternators and electrical equipment for power plant.....	29,600.00
Boilers and accessories for power plant.....	148,458.91
Motor-generator set, switchboard, etc.....	6,249.00
Switching locomotive for yard railroad system.....	4,450.00
Marine barracks: Marine barracks and officers' quarters.....	179,689.70
Coaling plant:	
6 locomotive cranes.....	53,970.00
15 air dump cars.....	33,310.00
3 switching locomotives.....	19,230.00
Fuel-oil plant:	
5 fuel-oil tanks and 1 gasoline tank.....	102,842.00
Foundations, piping, bermes, etc.....	48,408.00
Naval magazine, Kiahua:	
2 gunner's quarters.....	13,880.00
5 magazine buildings.....	79,699.00

Uncompleted work.

Description.	Obligation.	Percent completed June 30, 1914.
Grading.....	\$9,450.00	90
Purchase of steel sash, operating device, millwork, hardware, paint, etc., for 7 industrial buildings.....	62,315.00	95
Dwarf walls, gutters, and drains for 7 industrial buildings.....	4,500.00	60
Electric work in industrial buildings.....	48,000.00	26
Water system.....	62,000.00	95
Fresh-water and sewer connections for industrial buildings.....	20,000.00	70
Dry dock.....	3,191,662.03	(1)
Dry dock pumping equipment.....	128,254.10	(2)
Street paving.....	20,800.00	32
Transformers, including purchase and installation.....	5,000.00	47
Electric connections to dry-dock pump well.....	10,000.00	0
Pneumatic system.....	5,200.00	90
Railroad track scales.....	2,500.00	0
Quay wall.....	81,753.88	0
Water connections to coal plant wharf.....	8,000.00	0
Electric transmission system.....	24,500.00	93
Installation of yard telephone system.....	10,000.00	0
Construction of hospital buildings.....	130,016.29	65
Marine barracks: Construction of a double set of officers' quarters.....	17,700.00	25
Coaling plant:		
2 coal hoisting towers.....	77,600.00	0
Wharf and basin.....	300,000.00	96
Structural steel for coaling plant trestles, etc.....	160,606.00	40
Erection of structural steelwork.....	54,900.00	0
Fuel-oil plant: Bermes, piping, etc., for one fuel-oil tank.....	9,750.00	20
Naval magazine, Kuahua:		
Construction of dock.....	25,000.00	83
Electric power installation.....	5,500.00	5
Installation of fresh-water system.....	10,000.00	76
Construction of 7 magazine buildings.....	109,400.00	43
Construction of railroad system.....	25,000.00	97
Retaining wall and filling in connection with shipping house.....	10,000.00	5
Construction of building for marine guard.....	2,400.00	0
Gear-driven air compressor.....	2,270.00	0
Purchase of flat cars.....	1,712.00	0
Compressed-air locomotive and air pipe and fittings.....	4,205.00	0

¹ Work suspended during the fiscal year.

² Greater part of equipment manufactured and stored partly at the station and partly in the United States.

³ Includes all work being performed on the coaling plant by station force, and the estimate will be increased over figures given due to enlargement of project.

⁴ Material being fabricated in the United States and not delivered at the station at the end of the fiscal year.

Pensacola, Fla.—A considerable amount of work was performed at this yard in connection with fitting up the station for occupancy by the Marine Corps. The work was performed by the yard force, and the cost amounted to about \$6,000.

Philadelphia, Pa.—The more important work completed at this yard is described as follows: Construction of Pier No. 5, \$123,285.63; construction of toilet for officers at Dry Dock No. 2, \$7,352.35; construction of gasoline-storage building, \$9,999.25; dredging in reserve basin, \$286,011.19; dredging Delaware water front, \$39,644.61; construction of Pier D and section of quay wall, \$49,999.47; contract for three electrically driven capstans for Pier 5, \$9,270.

At the close of the year the following work remained uncompleted: Extension of electric circuits and pipes for water and compressed air on Pier No. 5, estimated cost \$13,455.62, nearly half completed; reconstruction of building No. 7 for central offices, work being performed by yard labor and estimated to cost \$50,000, well advanced; placing fenders and chocks on sea walls and pier by yard force, at an estimated cost of \$12,000, nearing completion; extending water system by yard labor, estimated cost \$15,000, well advanced; paving on and around Pier D, estimated cost \$10,000, just started;

installation of runway for crane, building No. 10, at a cost of \$10,000, nearly completed; construction of marine barracks by contract, to cost \$175,000, nearing completion; steam-heat distribution system for marine barracks, under contract at \$12,298, work just about ready to be started; work by local force, at estimated cost of \$22,000, on steam-heating system well advanced; paving on Marine Corps reservation, estimated cost \$12,688, nearing completion.

Portsmouth, N. H.—During the year a locomotive crane was purchased at a cost of \$6,626. An extension to the foundry was completed at a cost of \$9,643, being contract work. An electric traveling crane was purchased for the foundry at a cost of \$6,350. The combined railway and highway bridge was completed by contract at a cost of \$96,324. Quarters for commanding officer, naval prison, were completed at a cost of \$11,538. Track work and construction of storage room for cranes involved an expenditure of \$5,437.47. A garbage crematory was constructed by contract at a cost of \$4,380.

At the naval hospital considerable work was completed during the year. The new hospital buildings were completed during the early part of the fiscal year, the contract price for the Portsmouth group being \$300,007.64. A road to the hospital was constructed at a cost of \$6,248.91. Minor work performed at the hospital was as follows: Sterilizing equipment, \$999.50; kitchen equipment, \$3,510.67; metal weather strips, \$942.67; window guards and cell-door screens, \$1,553; window screens, \$1,586.67. All of this equipment was furnished by contract.

The construction by yard labor of the Kittery approach to the new railway and highway bridge, at an estimated cost of \$17,047.77, was well under way. The quay wall extension, under contract at \$95,695, was nearing completion. The progress on this work has been very slow.

The only important work under progress at the naval hospital was the installation of refrigerating equipment, under contract at \$5,827.36. The work was nearly half completed at the close of the year.

Puget Sound, Wash.—The main improvements completed were as follows: Railroad tracks around Dry Dock No. 2, \$10,086.65; electrical installation around Dry Dock No. 2, \$18,311; two officers' quarters, \$16,292.10; construction of Pier No. 5 and dredging, \$78,298.74; extension of Pier No. 8, \$9,865; purchase and installation of four electric traveling cranes for foundry, \$16,825; construction of Pier No. 4, \$163,848.

At the naval magazine the following work was completed: Quarters for inspector of ordnance, \$8,694.50; filling house, \$1,496.40; quarters for gunner, \$5,928; bag factory and storehouse, \$14,987.55.

The following work remained uncompleted at the navy yard: Pier 6, renewals and improvements, nearing completion, at a cost of about \$25,000; fireproofing south end of building No. 59 (pattern shop), under contract at \$9,000, but work not commenced; clearing site and constructing foundations for ship fitters' shop, mold loft, boiler shop, and steel storage buildings, \$16,000, nearing completion; furnishing and erecting by contract the steel framework of above buildings, \$148,570; construction of above buildings, aside from furnishing and erecting steel framework, \$89,930.15; air compressor, accessories, and piping, \$39,800, no work performed at the yard, as material was

being fabricated at the contractor's shops; construction of concrete pavements and sidewalks by yard labor, at an estimated cost of \$15,107.24, just started; construction of sewer in western portion of the yard by local force, estimated to cost \$19,200, well under way; installation of heating-system pumps, at a cost of \$6,323 under contract, no work performed at yard, fabrication being under way at contractor's shops; rebuilding Pier No. 1 by yard force, at an estimated cost of \$10,000, nearing completion; purchase of two 15-ton locomotive cranes for coaling plant, at cost of \$17,760, cranes delivered, but final tests not completed.

At the marine barracks the construction of one set of bachelor officers' quarters, at a contract price of \$33,447.07, was nearly half completed.

At the naval magazine a quay wall was being erected by contract at a cost of \$12,936. The work was well under way at the close of the year.

Washington, D. C.—The new foundry, costing \$200,000, was completed during the year. The greater part of the work on this building was performed under three separate contracts. A small amount of work was performed by the local force. Sections of new quay wall were completed under two contracts at a cost of \$59,451. The extension of the electric plant cost \$21,000.

At the naval hospital roadways were constructed at a cost of \$9,154.

The renewal of floors in shop buildings at the navy yard, estimated to cost \$25,000, was nearing completion. Water-front improvements, estimated to cost \$19,600, had been started. The installation of a 150-ton railroad-track scale was nearing completion, at a cost of about \$8,000. A contract was let for the construction of two radio towers, to cost \$8,765, but no work had been performed at site. A radio building was being erected by the yard force at an estimated cost of \$7,000. The work was about half completed at the close of the year.

General.—An ice-making and refrigerating plant was completed at the naval disciplinary barracks, Port Royal, S. C., at a cost of \$6,121. At the naval radio station, Jupiter, Fla., a power house was completed by contract at a cost of \$2,718.97. Two 300-foot steel radio towers were completed at the radio station, San Juan, P. R., at a cost of \$16,911.25. At the coal depot, San Diego, Cal., repairs to the fender system and relocation of the landing float were effected by contract at a cost of \$10,325. The water pipe from the naval training station, San Francisco, Cal., to Oakland, Cal., was completed at a cost of \$8,675.

H. R. STANFORD.

REPORT OF THE CHIEF OF THE BUREAU OF NAVIGATION.

DEPARTMENT OF THE NAVY,
BUREAU OF NAVIGATION,
Washington, D. C., November 1, 1914.

The following statement of the work of the bureau, together with certain recommendations, is submitted:

OPERATIONS IN MEXICO.

The greater part of the personnel of the Navy has been employed since March, 1914, in service in Mexican waters, where the endurance of the officers and men has been subjected to a most severe test with the gratifying and expected result of demonstrating that the personnel of the Navy is capable of withstanding the hardships of protracted severe service in the Tropics with the cheerful optimism that history and the traditions of the service promised.

In the operations connected with the occupation of the city of Vera Cruz, Mexico, on April 21, 22, and 23, 1914, the conduct and efficiency of the entire naval force and the numerous conspicuous acts of heroism performed by individuals was in entire accord with the most treasured traditions of the naval service.

Rear Admiral Frank F. Fletcher, in command of the naval forces in Mexican waters, landed a force at Vera Cruz, Mexico, on April 21, 1914, seized the customhouse, and took full possession of the city after severe fighting for several days. The landing force, consisting of 787 officers, sailors, and marines, was under the immediate command of Capt. William R. Rush, United States Navy, of the U. S. S. *Florida*. The landing was unopposed, but the force was fired upon soon after the seizure of the customhouse.

On April 22 Rear Admiral Charles J. Badger, commander in chief of the Atlantic Fleet, arrived and reenforced the forces ashore by seamen and marine battalions from the *Arkansas*, *New Hampshire*, *South Carolina*, *Michigan*, and *New Jersey*. Rear Admiral Fletcher then took command of the forces on shore and remained in command until after the city was fully pacified, when it was turned over to a brigade of the United States Army under Gen. Funston. The seamen brigade was then withdrawn to the ships and the marine brigade remained ashore for service with the Army. Commander Herman O. Stickney, United States Navy, assisted by Lieut. Reuben B. Coffey,

was appointed collector of customs, and Paymaster David Potter, United States Navy, fiscal agent. These officers remained ashore and served under the military government. During the occupation Commander Edward L. Beach acted as collector of customs for six weeks.

Surgs. G. M. Guiteras and R. H. Von Esdorf of the United States Public Health Service, experts in sanitation and quarantine, were attached to Admiral Fletcher's staff, and their expert knowledge of public-health matters was of great assistance in organizing and operating a health department of the city.

The naval landing force was under continuous fire from Mexican soldiers and snipers for two days, and the exceedingly small number of casualties, 15 killed and 56 wounded, can only be accounted for by the efficient and thorough work of all the officers and men engaged. While the conduct and efficiency of every officer and man employed in the operations at Vera Cruz was worthy of the highest commendation, the department, in accordance with specific recommendations made by Rear Admiral Fletcher, issued medals of honor in commemoration of this conspicuous event to the following-named men:

Henry N. Nickerson, boatswain's mate, second class, U. S. S. *Utah*.
 Abraham De Somer, chief turret captain, U. S. S. *Utah*.
 Joseph G. Harner, boatswain's mate, second class, U. S. S. *Florida*.
 George Cregan, coxswain, U. S. S. *Florida*.
 Harry C. Beasley, seaman, U. S. S. *Florida*.
 Lawrence C. Sinnett, seaman, U. S. S. *Florida*.
 Percy A. Decker, boatswain's mate, second class, U. S. S. *Florida*.
 Charles F. Bishop, quartermaster, second class, U. S. S. *Florida*.
 James A. Walsh, seaman, U. S. S. *Florida*.
 Charles L. Nordsiek, ordinary seaman, U. S. S. *Florida*.
 Fred J. Schnepel, ordinary seaman, U. S. S. *Florida*.
 Edward A. Gisburne, electrician, third class, U. S. S. *Florida*.
 Berrie H. Jarrett, seaman, U. S. S. *Florida*.
 William Zuiderveld, hospital apprentice, first class, U. S. S. *Florida*.

Highly commendatory letters for gallantry in action were written to the following-named officers and men, and made a part of their official service records:

Rear Admiral Frank F. Fletcher, U. S. N.	Lieut. James P. Lannon, U. S. N.
Capt. William R. Rush, U. S. N.	Lieut. Isaac C. Johnson, jr., U. S. N.
Capt. Harry McL. P. Huse, U. S. N.	Lieut. (j. g.) Jonas H. Ingram, U. S. N.
Capt. Edwin A. Anderson, U. S. N.	Ensign Theodore S. Wilkinson, jr., U. S. N.
Commander William A. Moffett, U. S. N.	Ensign George M. Lowry, U. S. N.
Commander Herman O. Stickney, U. S. N.	Ensign Oscar C. Badger, U. S. N.
Commander William K. Harrison, U. S. N.	Ensign Paul F. Foster, U. S. N.
Lieut. Commander Allen Buchanan, U. S. N.	Ensign Hugh C. Frazer, U. S. N.
Lieut. Commander Arthur B. Keating, U. S. N.	Ensign Edward O. McDonnell, U. S. N.
Lieut. Commander Rufus Z. Johnston, U. S. N.	Ensign Elliott Buckmaster, U. S. N.
Lieut. Commander Harry E. Yarnell, U. S. N.	Ensign David R. Lee, U. S. N.
Lieut. Richard Wainwright, U. S. N.	Ensign Lyal A. Davidson, U. S. N.
Lieut. Guy W. S. Castle, U. S. N.	Surg. Middleton S. Elliott, U. S. N.
Lieut. George M. Courts, U. S. N.	Surg. Cary D. Langhorne, U. S. N.
Lieut. Frank J. Fletcher, U. S. N.	Chief Boatswain John McCloy, U. S. N.
Lieut. Frederick V. McNair, U. S. N.	Niels Drustrup, chief turret captain.
Lieut. Julius C. Townsend, U. S. N.	Walter B. Weeks, ordinary seaman.
Lieut. Adolphus Staton, U. S. N.	George Berton, boatswain's mate, second class.
Lieut. John Grady, U. S. N.	Farrell N. C. Overall, boatswain's mate, first class.
Lieut. Charles C. Hartigan, U. S. N.	Frederick E. Norman, boatswain's mate, second class.

James J. Dermody, coxswain.
 George J. Smith, fireman, first class.
 Arthur J. Fogarty, gunner's mate, third class.
 Harry D. Shipman, coal passer.
 William J. Glynn, seaman.
 John Neukom, seaman.
 James A. Duryea, seaman.
 Charles D. Cameron, ordinary seaman.
 Robert Sample, chief turret captain.
 George E. Bancroft, seaman.
 Benjamin W. Claggett, hospital apprentice, first class.
 Harry Smith, boatswain's mate, first class.
 Roy Halloway, gunner's mate, first class.
 Paul W. Green, gunner's mate, third class.
 Fred E. Jorgensen, seaman.
 George E. Bent, boatswain's mate, first class.
 Walter E. Stevens, seaman.
 William J. Genereux, boatswain's mate, second class.
 Joseph Mueller, coxswain.
 Frank F. Smalley, coxswain.
 Samuel D. Barr, chief yeoman.
 Gustave Brodbeck, chief gunner's mate.
 Clarence R. Harshberger, seaman.
 Frederick Nanz, ordinary seaman.
 Elmer Van Camp, fireman, first class.
 Robert M. Ash, fireman, first class.

John B. McDonald, oiler.
 Augustin O'Neill, chief boatswain's mate.
 Herman H. Roloff, coxswain.
 John J. McLaughlin, boatswain's mate, second class.
 Robert A. England, seaman.
 Edwin C. Wertman, gunner's mate, first class.
 John H. Hendrickson, hospital apprentice, first class.
 James A. Anderson, coxswain.
 Robert G. Hart, ordinary seaman.
 John W. Hawkins, ordinary seaman.
 Edwin J. Cantwell, seaman.
 Solomon Clay, ordinary seaman.
 Daniel J. Reilly, boatswain's mate, first class.
 George Bradley, chief gunner's mate.
 James P. Cush, boatswain's mate, first class.
 Emil Tyburec, ordinary seaman.
 Joseph H. Risacher, boatswain's mate, second class.
 Johan Svenson, gunner's mate, first class.
 Clarence E. Williams, boatswain's mate, first class.
 George H. Boyd, quartermaster, first class.
 Augustus J. Hallberg, gunner's mate, first class.

MEDALS OF HONOR.

There is at present no provision of law which permits the award of medals of honor to officers of the Navy, and it is recommended that such legislation be enacted as is necessary in order to authorize the issue of medals of honor to such officers as may by extraordinary gallantry in action be, in the opinion of the department, worthy of such recognition.

During the seizure and occupation of Vera Cruz there were a number of officers and enlisted men recommended by Admiral Fletcher for gallantry and extraordinary heroism in battle. Although the officers and men fought side by side, the department was not able under the provisions of law to recognize the gallant deeds of the officers in the same manner as it recognized the gallant deeds of the men by awarding to the latter medals of honor.

TORPEDO TRAINING SHIPS.

The rapid development of torpedoes has for some years indicated the necessity for specially trained torpedo officers and men on board all vessels that carry these modern weapons, but the continued shortage of officers and the demand for their services at sea has heretofore prevented satisfactory training of a large number of expert torpedo officers.

This difficulty has within the last year been in a measure overcome by establishing a torpedo school on board the U. S. S. *Montana*, which vessel has been fitted with modern torpedo installation for this purpose.

It is the intention of the bureau that the course of torpedo training on the *Montana* shall last for five months, in which time, by exceptional application, it is hoped that an officer will be able to qualify for torpedo work in the battle fleet or the flotillas, and that men may become competent members of torpedo crews:

It is found that 20 officers can be advantageously instructed in one class, and by completing two classes of 20 officers each year it is expected that a sufficient number of qualified torpedo officers can be maintained to meet the urgent needs of the service.

The necessity for this special course in torpedo work has been considered sufficiently urgent to warrant a still further reduction of the number of junior officers and selected men available for general duty on board the battleships, and while the bureau realizes the present existing shortages of personnel in the fleet, it is believed that the increased efficiency acquired by the officers and men during their five months' course of training will be a sufficient return for the temporary loss of their services on the ships.

ATTENDANCE UPON POSTGRADUATE COURSES.

It is with gratification that I am able to report that an increase in the number of officers of higher grades to a course of instruction at the Naval War College has been made as well as an increase in the number of young officers assigned to postgraduate courses at the Naval Academy. There are now at the War College 20 officers in the grades of captain, commander, lieutenant commander, and lieutenant, and 50 lieutenants and lieutenants (junior grade) taking postgraduate courses in the various branches of engineering and ordnance.

It is hoped that when the number of officers is increased sufficiently so that they can be spared from their regular duties all line officers eventually will have the benefit of a postgraduate War College course, and that all young officers who desire it may have a thorough postgraduate course after serving a period of five years at sea.

THE OFFICERS' LIST (LINE).

The list of officers of the line of the Navy stood as follows on July 1, 1914:

Rear admirals.....	26
Captains.....	90
Commanders.....	121
Lieutenant commanders.....	206
Lieutenants.....	351
Lieutenants (junior grade).....	384
Ensigns.....	704
Total.....	1,881

Of these 1,881 line officers, 793 are above the rank of lieutenant (junior grade) and 1,088 of or below that rank. This condition is abnormal, and should be remedied. The matter of promotion, too, is a serious question, and becomes worse each year as each new class of ensigns (numbering on the average about 160) enters the service.

If we say that about 150 members of the classes complete the three years' service in grade of ensign each year, while an average of but about 40 lieutenants (junior grade) are being promoted up, it leaves a surplus to be added to the latter grade each year of something like 110, all eligible for promotion but awaiting vacancies, not more than 40 of which are likely to occur in any one year under the present law. It will readily be seen that the junior ensigns of the class of 1915 can not expect to be promoted to lieutenant commander, under such conditions, under 40 years, or at a time when they will have reached the statutory retirement age of 62.

In other words, all the officers in the service fit for duty would be junior lieutenants and ensigns. The lieutenants, lieutenant commanders, commanders, captains, and rear admirals would be officers who have only recently stepped up from having been worn-out junior lieutenants, and would only be waiting to reach the retiring age. It is needless to comment on such a situation. If the matter were not so serious it would be ludicrous.

The bureau has no doubt that Congress will remedy this condition of the personnel, but considers that it is its duty to recommend that speedy action be taken. Nothing can be done without increased cost, and the longer action is delayed the greater will be the cost.

About 50 per cent of the 351 lieutenants are now performing duty which normally should be performed by lieutenant commanders, while about 10 per cent are performing watch duty in the fleet which should be the normal duty of the grade.

The recent Mexican situation created an emergency that made great demands upon the commissioned personnel. It particularly illustrated the shortage of personnel compared with the number of ships we possess, and would be compelled to commission in time of war. Practically all officers on ships in Mexican waters (except heads of departments) were in the grade of ensign, and nearly half of the heads of departments were lieutenants. This state of affairs obtains with more than 75 per cent of the line officers at sea—a greater percentage than ever before known in time of peace. A redistribution of officers in the various grades of the line is urgently needed and recommended. This redistribution should be made as soon as practicable, and should place the line in a condition that would enable this bureau to assign officers of fitting rank and experience to positions commensurate in importance. A personnel board, of which the Assistant Secretary of the Navy is the senior member, is now in session for the purpose of considering and recommending to the department appropriate legislation looking toward increasing the efficiency of the Navy by causing a healthy flow of promotion throughout the various grades, thus enabling the most capable and efficient officers to reach the higher grades at an age when they are capable of rendering the most efficient service in those grades, and with experience commensurate with the duties and responsibilities thereof. This board is not to consider questions of rank, pay, or increases in total number now provided by law for any corps, and its recommendations are to be only of such a nature as to properly regulate promotions at as small an increase in cost as practicable.

Distribution of officers on Oct. 15, 1914.

	Line.	Warrant officers.	Medical Corps.	Pay Corps.	Civil engineers.	Naval constructors.	Medical Reserve Corps.	Dental Corps.	Chaplain.
1. On sea duty.....	1,274	430	157	105	0	1	2	10	17
2. Shore duty beyond sea ¹ ...	33	25	26	12	7	5	0	3	1
3. Educational work, training stations ²	112	3	5	0	0	0	0	0	0
4. War College postgraduates and students.....	62	0	0	1	0	0	34	0	0
5. Aviation duty ³	15	0	0	0	0	0	0	0	0
6. Sick and waiting orders.....	50	38	9	10	1	4	0	0	1
7. Shore duty other than 3 and 4 ⁴	329	218	133	90	30	66	13	13	5
	1,875	714	330	218	38	76	49	26	24

¹Includes naval attachés.²Includes 72 at Naval Academy and 3 War College staff (75).³North Carolina sea status.⁴Includes 21 line officers restricted by law to shore duty only.**EXAMINATION OF OFFICERS FOR PROMOTION.**

The practice of ordering officers before supervisory boards for professional examination for promotion has been continued, since inaugurated on a broad scale last year, and will be continued in the future. It has resulted in great saving in mileage, and keeps officers away from their duties for a much shorter time. Besides, it frequently enables the bureau to have officers examined much earlier than would be the case were it necessary to await an opportunity to order them to appear in person before a statutory board.

PAY CORPS.

The policy of the department at present is to appoint all officers of the Pay Corps from among enlisted men of the Navy. The examinations of applicants are held at stated times (one at present being held in August of this year) at the various yards and stations. There are now 12 vacancies in the Pay Corps and about 50 applicants from the enlisted force have been permitted to compete for the same. This policy opens a field of advancement to the enlisted men of the Navy and will enable those who are worthy to obtain commissions. None but those of good moral character and of good record in the service are allowed to compete.

The opportunity open to every enlisted man of the requisite qualifications to gain a commission in the Navy by his own efforts is an incentive to increased efficiency as well as to a high standard of morale among the enlisted force.

PAYMASTERS' CLERKS.

The situation of paymasters' clerks is unfortunate. The present law requires the appointment of a clerk to expire upon the detachment of his pay officer and is often an injustice to the clerk who finds himself without employment through no fault of his own, and usually entails considerable expense to the Government in paying mileage to his home and also mileage of a new clerk for the same pay officer to

duty, and in addition makes work that should be unnecessary in this bureau.

A bill proposing to put them in the same status as warrant officers is now pending before Congress, has the approval of the department, and may pass. This bill would limit all future appointments of paymasters' clerks to the enlisted personnel of the Navy and would thus afford a field for advancement for the yeoman branch, the members of which are not now eligible for advancement to warrant grade.

CHAPLAIN CORPS.

The corps of chaplains has been placed on a firm basis dependent upon the total personnel of the Navy and Marine Corps combined, one chaplain to each 1,250 personnel. This will give each large ship a chaplain, likewise one for all important shore stations.

NAVAL ACADEMY ENTRANCE EXAMINATIONS.

The results of the entrance examinations held as usual in February and April of the current year indicate that these examinations are now of about the proper degree as to severity and scope. It is very desirable that these examinations should not be so severe or comprehensive as to bar any young man who has a thorough grounding in what are usually termed the common school branches, and yet that they should be difficult enough to reasonably insure that the young men entering are sufficiently advanced to successfully pursue the required course without too large a percentage of failure, and without lowering the high standard of scholarship that is traditional at the Naval Academy.

The law permitting the Secretary of the Navy to annually appoint 15 enlisted men as midshipmen in the order of merit after competitive examination was enacted on the last day of the fiscal year. Anticipating the enactment of the law the bureau had made preparations for holding the examination on every ship and at every station where there might be candidates, in order that there would be time for successful candidates to enter before October 1, 1914. Considering the short time that the enlisted candidates had for preparation it is encouraging to note that as many as five passed the examination and entered the academy. It is the bureau's belief that many more than 15 will meet the requirements next year and during succeeding years.

COURSE OF STUDY OF NAVAL ACADEMY.

The course in English studies has been materially improved and modernized during the past year and steps have been taken to encourage and promote literary tastes and literary work. The formation of voluntary literary and debating societies will be invited.

Summer course for fourth class.—With the above objects specially in view, a systematic course of reading, lectures, debating, etc., was outlined for the fourth class during the past summer, in order to direct their thoughts in literary channels at the beginning of their career.

A more general and habitual use of the library will be encouraged, and a large number of selected books have been placed in the various recreation rooms of Bancroft Hall, where they may be accessible at all times.

POSTGRADUATE COURSE.

This course has been developed and improved, and is in general on a satisfactory basis. Including those under instruction at the Naval Academy, Columbia University, Bureau of Ordnance, Massachusetts Institute of Technology, and a few scattered elsewhere, about 50 young officers had advantage of this instruction. The majority of them took courses embracing steam and electrical engineering, and it is anticipated that the expert technical knowledge demanded in the naval service in these branches will be efficiently supplied by post-graduates in these subjects. It is hoped that the Marine Reservation, barracks and officers' quarters, which are situated conveniently to the Naval Academy may eventually be obtained in a manner satisfactory to all concerned, for the use of the postgraduate school. To have reading rooms, lecture rooms, library, quarters, athletic and recreation facilities, etc., of the postgraduate students, all in close proximity to each other, would add very materially to the efficiency of the school, and the Marine Corps property above referred to could be made to admirably fulfill this purpose.

ACADEMIC FEATURES.

Constant effort is made to perfect the course of instruction, keeping always in mind the education that is most essential and necessary to a naval officer without ignoring the importance of a broad general grounding.

An important change in policy has been to transfer the Naval Academy organization to sea during the summer months. For this purpose a practice squadron of three battleships with the superintendent as squadron commander is utilized. All officers of the ships are composed of officers who have been regularly assigned to the Naval Academy and who have been instructors in the various departments. During the past summer the practice squadron made a cruise to European ports. The bureau recommends that the cruise be made to San Francisco via the Panama Canal next year, and that the squadron remain at Panama long enough to give opportunity for all midshipmen to gain a comprehensive knowledge of the important features connected with the canal.

RADIO SERVICE.

The report of the superintendent of the Radio Service for the calendar year ending December 31, 1913, who has charge of the preparation of regulations, etc., for the Naval Radio Service and control of all commercial work handled by naval radio stations, is published in a separate pamphlet as Appendix No. 4 to this report. The total number of commercial messages handled by all stations and ships of the Navy for the average period of 10 months ending December 31, 1913, were 17,710 and the total receipts were \$20,860.52.

During the past few months the President ordered strict censorship of all messages passing through commercial radio stations in order to effectually carry out the neutral policy of this Government, and directed the Secretary of the Navy to carry such orders into effect. In compliance with such directions, the Secretary of the Navy detailed certain naval officers to duty at the various radio stations in order that the proper censorship of messages might be effected, and

issued detailed instructions in accordance with which strict censorship of all messages received or sent through the various stations has been exercised. A large number of small private stations have been inspected and dismantled.

ENLISTED PERSONNEL.

During the year the enlisted strength of the Navy has been recruited to its full strength, and many applicants for enlistment have, of necessity, been refused in order to avoid exceeding the number allowed by law. This has permitted the establishment of a policy of very liberal discharge by purchase. While the final approval of such requests has been retained with the bureau, all requests when supported by a substantial reason will receive approval.

GRADED RETIREMENT OF ENLISTED MEN.

In the opinion of the bureau, this subject is worthy of careful consideration.

Under present law enlisted men will be retired upon their own application after 30 years' service.

Experience has shown that only a few men remain long enough to benefit by this law. Its practical operation, therefore, is not as an inducement to retain men in the service, but rather as a reward for men who remain for various reasons of their own.

It is believed that a graded retirement law based on periods of 12, 16, 20, and 24 years would be a great inducement to many desirable men, who would otherwise go into civil life to remain at least long enough to give the country the benefit of their education, training and experience. Those retired, however, should be regarded as a reserve subject to call in time of war, and at intervals for periods of drill on board ship, in order that they might keep in touch with progress in the naval service.

A reserve of such experienced men as a nucleus would be a potent factor in the formation and instruction of a national naval reserve, of which the Navy is very much in need.

DEMANDS UPON THE ENLISTED PERSONNEL.

Unusual demands have been made to commission various ships needed in West Indian, Central American, and Mexican waters. These have happily been met, principally because the quota of enlisted men gained its full strength. The North Atlantic Fleet has been kept nearly up to full complements during the year. During the coming year and a half it is expected that 8 destroyers, 10 submarines, 2 dreadnoughts, and several auxiliaries will be ready for commissioning, calling for a larger number of men. As no extra allowance is provided for these ships, retrenchments will have to be provided in various ways to meet the situation.

The number of apprentice seamen allowed by law being 3,500, it was found at one time when the recruiting was particularly active to be necessary to advance the recruits who had been longest under training to the rating of ordinary seaman to comply with the requirements of the law. At present all stations have been given a fixed complement of apprentice seamen which is not to be exceeded. While

very satisfactory reports have been received of the product of the Great Lakes Training Station, it has been found necessary to limit the number there below what could be profitably handled.

TRAINING OF ENLISTED MEN.

The four training stations at Newport, Norfolk, Great Lakes, and San Francisco have been conducted with excellent results. The course has been increased to four months. Heretofore this time had varied from four to as small a number as two months when the demands for the personnel in the fleet made it necessary for an early detachment of the apprentice seamen. The extension and standardizing of the period of training to four months has permitted the establishment of a more regular and systematic course of training, and the addition of a curriculum of educational studies graded to the previous education the apprentice seamen have received, and consistent with the time that can be spared therefor.

The San Francisco Training Station can accommodate only 820 apprentices. This number has been reached on several occasions, and unfortunate crowding resulted. The replacing of the *Intrepid* by the *St. Louis* will relieve the situation to some extent, but with the opening of the Panama Canal increased importance must extend to this only training station and recruit depot on the Pacific coast.

The following table shows the total number of apprentice seamen that were rated ordinary seamen or coal passers and transferred to general service during the fiscal year from the four training stations, and the total number remaining under instruction:

	Rated and transferred to service.		Remaining under instruction.
	Ordinary seamen.	Coal passers.	
Newport.....	2,645	609	781
Norfolk.....	1,378	285	813
Great Lakes.....	1,561	149	352
San Francisco.....	1,266	567	230
	6,840	1,670	2,176

SCHOOL FOR ENLISTED MEN.

General Order No. 63, issued by the Secretary of the Navy about the beginning of the calendar year, outlined a comprehensive plan of study and education, both academic and professional, for the enlisted men of the Navy. Systematic school had already, by the Secretary's order, been established at the four training stations; these were successful from the outset and are a manifest help and advantage to all the young men who pass through the stations.

Upon receipt of General Order 63, school and special instruction were immediately begun upon all vessels with such facilities as were at hand or could be improvised. Unavoidable delay in getting suitable academic textbooks and in getting professional books and pamphlets revised and in suitable form prevented the school system from starting off with the smoothness that might have been anticipated, but nevertheless it was successfully begun. In April a very large number of the vessels of the Navy were sent to Mexican waters and it was deemed advisable to suspend school on board, so that the plan was interrupted before it had a chance to be put in full operation.

Such reports as have been received indicate the interest of officers and men, and, with some modifications that the brief and partial operation of the plan have suggested, it is anticipated that it can be fully inaugurated again in the autumn with every indication that it will cause a marked improvement in the efficiency of the enlisted personnel by giving them increased knowledge along many lines and opportunities for advancement.

VOCATIONAL TRADE SCHOOLS.

The following trade schools have been maintained under the direction of the bureau:

At Newport: Seaman gunners' class for instruction in torpedoes; yeoman class; cooks' and bakers' classes; class for hospital corpsmen.

At New York: Electrical class for instruction in general electricity; electrical class for instruction in radiotelegraphy.

At Philadelphia: Class for instruction of firemen in oil burning.

At Washington: Seaman gunners' class.

At Norfolk: Artificers' classes for instruction of ship fitters, plumbers, carpenters, blacksmiths, and painters; musicians' class; messman class.

At Charleston, S. C.: Machinists' mates class; coppersmith class.

At Mare Island, Cal.: Electrical class for instruction in general electricity; electrical class for instruction in radiotelegraphy.

At San Francisco: Yeoman class; class for cooks and bakers; musicians' class.

When the Mexican situation developed it became necessary to temporarily discontinue the seaman gunner class at the navy yard, Washington, D. C., and the fuel-oil class at Philadelphia. It will be impracticable to continue these schools until some of the vessels now in commission are placed in reserve.

The other service trade schools have been continued, but the numbers attending them have of late been a little below normal. This is due to the necessity of having to discontinue the enlistment of landsmen for trades. It has also been necessary to discontinue the enlistment of men in the artificer branches, owing to the quota being full, men in other branches being required to preserve the balance between ratings necessary to properly man the ships.

Table showing distribution of enlisted personnel Oct. 15, 1914.

Vessels afloat.....	41, 448
4 training stations, including those undergoing training, instructors, and necessary details.....	3, 105
14 service trade schools, including those under instructions, instructors, and necessary details.....	970
Total.....	4, 075
16 hospitals:	
Hospital attendants.....	365
Patients.....	1, 023
Total.....	1, 388
Recruiting stations:	
25 main stations.....	} 375
79 substations.....	
51 radio stations.....	258
Ships under construction.....	111
Shore duty at navy yards and stations:	
Special details of various ratings.....	35
Hospital Corps men.....	68
Bandsmen.....	271
Seamen branch, artificers, yeomen, and messmen.....	441
Total.....	880

Insular force (natives of island possessions):	
Cavite.....	120
Olongapo.....	120
Guam.....	38
Tutuila (Fita Fita guard).....	78
Total.....	356
General detail, awaiting transfer to cruising ships.....	750
Not available:	
Insane asylums.....	24
Prisoners.....	1,103
On leave.....	450
Traveling to and from stations.....	750
Awaiting discharge, action of courts, witnesses, etc., and old men.....	425
Total.....	2,752
Grand total.....	52,293

NEW SCHEDULE OF PUNISHMENTS.

Important changes have been made in the matter of the punishment of enlisted men. A new schedule of punishments is now in effect based as far as possible on the theory that men guilty of many of the most common offenses should be punished by reduction of pay for varying amounts rather than by total loss of pay or imprisonment, and that men who are guilty of certain offenses which demonstrate their unfitness for the service, but which are not of a nature to render imprisonment essential for the maintenance of discipline, be summarily discharged.

In this way it is hoped to rid the service of men who make a practice of committing the most common offenses occurring in the administration of naval discipline, namely, unauthorized absence in its various forms and drunkenness on shore. It is the intent of the new schedule, however, to make it possible, in the discretion of the commanding officers, to retain promising men for a period of six months on probation, provided the offenses committed do not involve moral turpitude, with a view to discharging them during that time if they are found unworthy, or restoring them fully to duty at the end of the six months if their conduct is found to warrant.

Provision is also made to avoid the turning at large of enlisted men without any money. Men discharged by court-martial or as undesirable will hereafter have the badges of uniform, such as cap, ribbons, metal devices, rating badges, etc., removed at the time of discharge. It is hoped ultimately to have a supply of civilian clothing to be exchanged for the uniform clothing of men so discharged.

An important change has also been made in the interest of the enlisted men to remit all of the money forfeited by sentence of court-martial if finally honorably discharged, or one-half of the money forfeited if discharged with an ordinary discharge.

With a view to allowing men who are dissatisfied or who have some good reason for desiring their discharge to leave the Navy in an honorable status the conditions under which men might purchase discharge have been made easier. Under the new regulations it is not necessary for the enlisted man to show that conditions have arisen which did not exist at the time of enlistment, as was required under the old order, and the amount of refund has been materially reduced. The man who formerly has to refund the cost of his

clothing outfit, \$60, and two or one month's pay of his rating, according to the length of his service, will now have to refund only the value of his clothing outfit plus the cost of transportation to the first place of duty. Provision is also made for the discharge of men serving in other than their first enlistment.

Men who are specially instructed at the service trade schools will not be granted a discharge by purchase during their current enlistment for the reason that they should give adequate return for the extra expense incurred in their behalf.

RECRUITING.

Recruiting during the past fiscal year has been very satisfactory. There was a steady gain in the complement until the quota was reached in May, when it became necessary to suspend enlistments temporarily. Since that time the enlisted force has been recruited practically to its maximum strength. This result was attained without special effort, and with a greatly diminished expenditure for advertising. During the latter months of the year, the advertising was limited to one magazine, which was contracted for by the year. The classified advertisements in the daily papers were altogether discontinued. A limited amount of bill posting was used in the districts where outdoor advertising is especially desirable.

The circular letter system has been conducted without change throughout the year. The supply of illustrated booklets became exhausted during the winter, and a new edition is being prepared.

The only change of consequence in the recruiting stations was the placing on an independent basis of the San Diego office. Previously, recruiting has been conducted in that vicinity under the supervision of the commanding officer of the U. S. S. *Iris*.

The transfer of transportation charges of applicants from the "Recruiting" appropriation to "Transportation, Navigation," which became effective July 1, is in the interest of better accounting, and a saving to the appropriation applicable to the recruiting service.

Occasional instances continue to occur of magistrates who permit wayward youths to go free on suspended sentences with the understanding that they will enlist in the Navy. Such efforts are usually frustrated, due to the publicity given such cases and the policy of requiring applicants to produce evidence of good character. The sentiment of the public toward the Navy has undergone a marked change in recent years, due partly to the extensive advertising policy of the department, and partly to the improvements in the service. It is believed that no difficulty would be experienced in meeting an increased demand upon the recruiting service.

IDENTIFICATION SYSTEM.

During the fiscal year ending June 30, 1914, the bureau detected, through the operations of its finger-print system of personal identification, 602 men who attempted to enlist fraudulently under assumed names. These men had either deserted from the Army, Navy, or Marine Corps or had been discharged for various reasons which would have prevented them from reentering the service under their true names.

By the system the bureau is able to detect all persons with discreditable military service who attempt to enlist in the Navy fraudulently. As soon as a man is enlisted at a recruiting station his finger prints are taken and forwarded immediately to the bureau for comparison with those on file in the identification office. If he has had prior service since January 1, 1907, the date the system was placed in operation, his identity will be established within a few minutes after the receipt of his finger prints.

PENSIONS OF INMATES OF NAVAL HOMES.

Previous to the beginning of the present fiscal year it was necessary for men entering the Naval Home to forfeit their pensions, thereby rendering their families, who had been dependent upon these pensions, destitute and a charge upon charity. This, in a large number of cases, prevented men who had families from accepting the benefits of the Naval Home to which they were by law entitled. In view of this situation and of the fact that men who had seen service in the Army were not required to forfeit their pensions upon entering Soldiers' Homes, the department recommended that legislation be enacted which would place these naval men upon the same basis in regard to receiving their pensions as those of the Army.

During the last session of Congress a law was enacted to make this possible, and now pensions of beneficiaries are not to be credited to the naval pension fund as formerly directed by law, but are to be disposed of in the same manner as pensions for inmates of Soldiers' Homes; that is, any beneficiary of the Naval Home who is receiving a pension of any kind from the Government and who has a child, wife, or parent living shall be entitled to have his pension or any part of it paid to such wife, child, or parent.

GOOD-CONDUCT MEDALS.

The bureau recommended, and the department approved, the discontinuance of the practice which has been in vogue for the last few years, of issuing good-conduct medals to men discharged at the end of first enlistment. Under this practice the issuance of such medals became so numerous that their value was greatly cheapened, and the men ceased to regard them with the same feeling of pride as was the case when they were awarded only to men who had stood the test of longer periods of service.

HONORABLE-DISCHARGE BUTTONS.

The bureau now has under consideration the adoption of an honorable-discharge button which it recommends for distribution to all honorably discharged men. This button is not in lieu of a good-conduct medal but stands as a visible conveniently displayed sign for what its name indicates, i. e., service in and an honorable discharge from the United States Navy. It could be worn with uniform and with civilian clothes, and though not taking the place of the good-conduct medal it would be more practical toward indicating the honorable service of the wearer than would the medal the display of which is more restricted, particularly for men out of the service.

VICTOR BLUE.

To the SECRETARY OF THE NAVY.

APPENDIXES.

- No. 1. Report of Hydrographer.
 No. 2. Report of Superintendent of Naval Observatory.
 No. 3. Report of Naval Militia.
 No. 4. Report of Superintendent of Naval Radio Service.

TABLES.

Comparison of enlistments, extensions, discharges, deaths, retirements, and desertions for the fiscal years 1913 and 1914.

	1913	1914	Gain.	Loss.
Total men enlisted.....	17,918	18,947	1,029	.....
Total extended enlistment.....	653	1,234	581	.....
Total discharged.....	15,420	12,926	2,494	.....
Died.....	191	227	.....	36
Retired.....	45	60	.....	15
Deserted.....	2,523	1,965	558	.....
Total.....			4,662	51
Gain.....			4,611	.....

Comparative strength of enlisted personnel on June 30 of the fiscal years 1913 and 1914.

Total men in service June 30, 1913.....	48,068
Total men in service June 30, 1914.....	52,667
Gain.....	4,599
Applicants for enlistment.....	88,943
Applicants accepted and enlisted:	
First enlistment.....	13,780
Reenlistment.....	5,168
Total enlistments.....	18,948
Applicants accepted who failed to enlist.....	6,613
Applicants rejected for physical disability.....	47,240
Applicants rejected for other causes.....	16,142
	63,382
	88,943

Of the number rejected (63,383) the disqualifications of 552 were waived and they were enlisted in the number 18,948.

Summary of enlistments.

Number of enlistments at recruiting stations.....	14,488
Number of enlistments at naval stations in the United States.....	635
Number of enlistments in insular possessions.....	483
Number of enlistments on board of receiving ships.....	1,724
Number of enlistments on board of cruising vessels.....	1,618
Total.....	18,948

Enlistments.

	1912	1913	1914
First enlistments.....	11,516	12,088	13,780
First reenlistments over 4 months from date of discharge.....	(1)	820	978
First reenlistments within 4 months from date of honorable discharge.....	(1)	2,518	2,114
First reenlistments within 4 months from date of ordinary discharge.....		84	84
First reenlistments within 4 months from date of discharge, no benefits.....	(1)	21	39
Other reenlistments over 4 months from date of discharge.....	*782	123	172
Other reenlistments within 4 months from date of honorable discharge.....	*3,223	266	206
Other reenlistments within 4 months from date of ordinary discharge.....	*143	8	6
Other reenlistments within 4 months from date of discharge, no benefits.....		10	13
Reenlistments within 4 months from date of discharge, under honorable continuous-service certificate.....	2,040	1,935	1,559
Reenlistments within 4 months from date of discharge, under ordinary continuous-service certificate.....	59	46	26
Total.....	17,743	17,918	18,947

¹ Included in the number marked *.

Enlistments extended since Aug. 12, 1912.

	1913	1914	Total.
For 1 year.....	304	208	512
For 2 years.....	32	11	43
For 3 years.....	11	81	92
For 4 years.....	306	281	587
Total extensions.....	653	581	1,234

Discharges.

	1912	1913	1914
With honorable discharge expiration of enlistment.....	10,500	9,598	7,411
With ordinary discharge expiration of enlistment.....	932	663	528
With ordinary discharge expiration of enlistments not recommended for reenlistment.....	73	141	70
With dishonorable discharge.....	755	725	665
With bad-conduct discharge.....	1,507	1,526	1,361
For physical disability.....	1,032	1,151	1,014
For unfitness.....	2	3	1
For inaptitude.....	128	151	164
As undesirable.....	509	757	877
Miscellaneous reasons.....	142	140	323
By purchase.....	403	496	451
Enlistment canceled.....	40	70	52
Total.....	16,023	15,420	12,926
Died.....	224	191	227
Applicants for retirement.....	37	45	60

Desertions for fiscal years ending June 30.

	1912	1913	1914
Absentees during year.....	3,055	3,237	2,728
Absentees voluntarily returning to service.....	503	434	483
Absentees apprehended and delivered.....	485	531	561
Total surrendered and apprehended.....	988	965	1,049
Total absentees June 30.....	2,067	2,272	1,679
Apprehended and surrendered, convicted for desertion.....	211	251	285
Total deserters for fiscal year.....	2,278	2,523	1,965
Total number of enlisted men in service during fiscal year.....	64,483	66,702	68,041
Percentage of desertion based upon total number of men in service.....	3.52	3.77	2.89
Decrease of percentage for 1914.....			.88

Citizenship, year ending June 30, 1914.

	Native born.	Naturalized.	Aliens declared intentions.	Aliens resident in United States.	Aliens non-resident in United States.	Natives of—				Total
						Porto Rico.	Guam.	Samoa.	Philippines.	
Petty officers.....	16,392	1,935	35	17	13	15	7	8	135	18,557
Other rates.....	31,547	636	45	115	238	35	88	76	1,330	34,110
Total.....	47,939	2,571	80	132	251	50	95	84	1,465	52,667

Number and percentage of citizenship.

	1910	1911	1912	1913	1914
Petty officers.....number.....	14,333	15,479	15,598	17,204	18,557
Native born.....per cent.....	83.43	84.95	85.75	87.04	88.33
Naturalized.....do.....	14.08	13.49	12.93	11.70	10.42
Declared intentions.....do.....	.89	.57	.40	.31	.19
Aliens resident in the United States.....do.....	.07	.12	.07	.07	.09
Aliens nonresident in the United States.....do.....	.21	.17	.08	.09	.07
Natives of colonial possessions.....do.....	.72	.70	.77	.79	.89
Citizens of the United States.....do.....	98.11	98.44	98.68	98.75	98.78
Enlisted men other than petty officers.....number.....	30,743	32,133	31,557	30,864	34,110
Native born.....per cent.....	91.51	92.13	92.46	92.00	92.49
Naturalized.....do.....	3.46	2.99	2.57	2.68	1.86
Declared intentions.....do.....	.41	.32	.21	.21	.13
Aliens resident in the United States.....do.....	.65	.47	.47	.34	.34
Aliens nonresident in the United States.....do.....	.50	.57	.48	.85	.70
Natives of colonial possessions.....do.....	3.47	3.52	3.81	3.92	4.48
Citizens of the United States.....do.....	94.97	95.12	95.03	94.67	94.34
Citizenship of the total enlisted force.....number.....	45,076	47,612	47,515	48,068	52,667
Native born.....per cent.....	88.94	89.79	90.20	90.22	91.02
Naturalized.....do.....	7.03	6.41	6.05	5.91	4.88
Citizens of the United States.....do.....	96.97	96.20	96.25	96.13	95.90

Nativity and residence of the enlisted force.

	Born.	Residence.		Born.	Residence.
Alabama.....	452	428	Nevada.....	23	19
Alaska.....	2	5	New Hampshire.....	252	280
Arizona.....	38	39	New Jersey.....	2,276	2,658
Arkansas.....	408	304	New Mexico.....	44	95
California.....	1,074	2,112	New York.....	7,922	7,922
Colorado.....	376	520	North Carolina.....	858	660
Connecticut.....	869	924	North Dakota.....	90	126
Delaware.....	221	212	Ohio.....	2,420	2,328
District of Columbia.....	470	679	Oklahoma.....	251	609
Florida.....	223	251	Oregon.....	226	348
Georgia.....	868	777	Pennsylvania.....	4,940	5,013
Idaho.....	71	98	Rhode Island.....	699	1,063
Illinois.....	2,617	2,480	South Carolina.....	412	397
Indiana.....	1,658	1,501	South Dakota.....	153	134
Iowa.....	1,127	1,016	Tennessee.....	788	792
Kansas.....	855	651	Texas.....	1,568	1,600
Kentucky.....	952	738	Utah.....	104	100
Louisiana.....	622	655	Vermont.....	144	124
Maine.....	367	303	Virginia.....	1,314	1,497
Maryland.....	1,515	1,588	Washington.....	267	648
Massachusetts.....	3,144	3,420	West Virginia.....	287	241
Michigan.....	1,261	1,118	Wisconsin.....	1,041	990
Minnesota.....	633	594	Wyoming.....	30	43
Mississippi.....	396	327	No residence.....	.....	106
Missouri.....	1,551	1,408			
Montana.....	102	114			
Nebraska.....	612	540	Total.....	47,757	50,565

Nativity and residence of the enlisted force—Continued.

	Born.	Residence.		Born.	Residence.
At sea.....	9	4	Japan.....	192	69
Argentina.....	2		Korea.....	1	
Azores.....	2		Malta.....	3	
Australia.....	19	2	Mexico.....	8	2
Austria.....	87	3	Newfoundland.....	21	
British Columbia.....	2	11	Nova Scotia.....	28	
British West Indies.....	37	3	New Brunswick.....	9	1
British East Indies.....	4		New Zealand.....	2	
Belgium.....	16		Nicaragua.....	1	1
Bohemia.....	13		Norway.....	167	4
Bolivia.....	2		Panama.....		2
Brasil.....	1		Persia.....	2	
Canada.....	145	43	Peru.....	2	
Cape Verde Islands.....	3		Philippines.....	1,464	1,418
Chile.....	3	210	Prince Edward Island.....	3	
China.....	228		Poland.....	11	1
Costa Rica.....	3		Porto Rico.....	47	36
Cuba.....		2	Portugal.....	8	
Danish West Indies.....	9	1	Queensland.....	1	
Denmark.....	103	3	Roumania.....	6	
Ecuador.....	2		Russia.....	123	2
England.....	189	5	Servia.....	1	
Egypt.....	2		Scotland.....	76	3
Finland.....	78	5	Society Islands.....	2	
France.....	21	1	South African Republic.....	1	
Germany.....	573	5	Spain.....	6	
Greece.....	34	7	Sweden.....	251	9
Guam.....	96	110	Switzerland.....	24	
Guatemala.....	1		Samoa.....	87	92
Hawaii.....	31	29	Turkey.....	13	1
Holland.....	28	1	Venezuela.....	1	
Hungary.....	42		Wales.....	6	1
Italy.....	163	5			
Ireland.....	393	10	Total.....	4,910	2,102

	1913	1914	Increase.
Native born.....	43,367	47,757	4,390
Foreign born.....	4,701	4,910	209
Total force.....	48,068	52,667	4,599

States furnishing the greatest number native born.

New York.....	7,086	Missouri.....	1,551
Pennsylvania.....	4,940	Maryland.....	1,515
Massachusetts.....	3,144	Virginia.....	1,314
Illinois.....	2,617	Michigan.....	1,261
Ohio.....	2,420	Iowa.....	1,127
New Jersey.....	2,276	California.....	1,074
Indiana.....	1,658	Wisconsin.....	1,041
Texas.....	1,568		
		Total.....	34,592

Fifteen States furnish 66 per cent of the enlisted force.

Greatest number of foreign born, by countries.

	1913	1914	Increase.	Decrease.
Philippines.....	1,137	1,464	327	.....
Germany.....	602	573	.....	29
Ireland.....	427	393	.....	34
Sweden.....	286	251	.....	35
China.....	232	228	.....	4
Japan.....	206	192	.....	14
England.....	200	189	.....	11
Norway.....	280	167	.....	113
Italy.....	168	163	.....	5
Canada.....	160	145	.....	15
Russia.....	128	123	.....	5
Denmark.....	105	103	.....	2
Total.....	3,931	3,991	327	267

Color.

White.....	49,052	Chamorro.....	98
Negro.....	1,431	Hawaiian.....	25
Chinese.....	248	American Indian.....	18
Japanese.....	198	Porto Rican.....	46
Filipino.....	1,464		
Samoa.....	87	Total.....	52,667

Good-conduct medals.

	Men.	Medals.
1 medal.....	3,888	3,888
2 medals.....	1,117	2,235
3 medals.....	434	1,302
4 medals.....	201	804
5 medals.....	71	355
6 medals.....	26	156
7 medals.....	11	77
8 medals.....	.....	.....
9 medals.....	.....	.....
10 medals.....	.....	.....
Total.....	5,748	8,816

Comparative statement of reenlistments.

	1913	1914	Increase.	Decrease.
Men entitled to reenlist under honorable discharge.....	10,261	7,939	.....	2,322
Total men reenlisted.....	5,838	5,167	.....	671
Total men enlisted.....	17,918	18,947	1,029	.....
Percentage of men entitled to reenlist who reenlisted.....	57	65	8	.....
Men enlisted during year ending to serve during minority.....	2,678	2,896	218	.....
Enlisted men serving during minority.....	6,412	6,562	150	.....
Men holding certificates of graduation.....	1,380	1,686	306	.....
Men serving under continuous-service certificates.....	14,463	16,143	1,680	.....
Total number of men serving under reenlistment.....	16,983	18,640	1,657	.....
Per cent of enlisted men serving under reenlistment.....	36.33	35.39	.06	.....
Men serving—				
Under first enlistment.....	31,085	34,027	2,942	.....
Under second enlistment.....	10,040	10,909	869	.....
Under third enlistment.....	4,015	4,529	514	.....
Under fourth enlistment.....	1,385	1,588	203	.....
Under fifth enlistment.....	658	745	87	.....
Under sixth enlistment.....	364	407	43	.....
Under seventh enlistment.....	224	249	25	.....
Under eighth enlistment.....	172	136	.....	36
Under ninth enlistment.....	89	47	.....	42
Under tenth enlistment.....	36	30	.....	6
Total in service, including prisoners.....	48,068	52,667	4,683	84
Net increase.....	.....	.....	4,599	.....

Table showing the changes in status of vessels during the fiscal year ended June 30, 1914.

NEW VESSELS COMMISSIONED.

Vessel.	Date.	Vessel.	Date.	Vessel.	Date.
Cassin.....	Aug. 9, 1913	H-3.....	Jan. 16, 1914	Balch.....	Mar. 26, 1914
Duncan.....	Aug. 30, 1913	Aylwin.....	Jan. 17, 1914	New York.....	Apr. 15, 1914
Cummings.....	Sept. 19, 1913	Benham.....	Jan. 20, 1914	Sacramento.....	Apr. 26, 1914
H-1.....	Dec. 1, 1913	G-4.....	Jan. 23, 1914	McDougal.....	June 16, 1914
H-2.....	do	K-2.....	Jan. 31, 1914	Monocacy.....	June 24, 1914
G-2.....	do	Texas.....	Mar. 12, 1914	Palos.....	Do.
Parker.....	Dec. 30, 1913	K-1.....	Mar. 17, 1914		

VESSELS RECOMMISSIONED.

Ozark.....	July 13, 1913	Montana.....	Dec. 30, 1913	Washington.....	Apr. 23, 1914
B-2.....	Aug. 1, 1913	Illinois.....	Mar. 16, 1914	Preble.....	Do.
Cheyenne.....	Aug. 20, 1913	Idaho.....	do	Lawrence.....	Do.
Galveston.....	Aug. 26, 1913	Missouri.....	do	Hull.....	Do.
B-3.....	Sept. 2, 1913	Leonidas.....	Apr. 1, 1914	Hopkins.....	Apr. 25, 1914
Vestal.....	Sept. 3, 1913	Cleveland.....	Apr. 8, 1914	Machias.....	Apr. 27, 1914
Birmingham.....	Oct. 1, 1913	South Dakota.....	Apr. 17, 1914	Marietta.....	Do.
Stewart.....	Nov. 5, 1913	Albany.....	do	Vicksburg.....	Apr. 23, 1914
Chester.....	Nov. 8, 1913	Chattanooga.....	Apr. 21, 1914	West Virginia.....	Do.
Seyern.....	Nov. 15, 1913	Castine.....	Apr. 22, 1914	Potomac.....	June 9, 1914
Raleigh.....	Dec. 5, 1913	Salem.....	Apr. 23, 1914		

VESSELS PLACED IN RESERVE.

Tennessee.....	Sept. 2, 1913	Walke.....	Nov. 1, 1913	Montgomery.....	Jan. 3, 1914
Illinois.....	Sept. 5, 1913	Monaghan.....	Nov. 5, 1913	Panther.....	Mar. 16, 1914
Montana.....	Sept. 8, 1913	Stewart.....	do	Isla de Luzon.....	May 13, 1914
Seyern.....	Sept. 9, 1913	Terry.....	do	Milwaukee.....	June 14, 1914
Idaho.....	Oct. 27, 1913	Hopkins.....	do	G-1.....	June 16, 1914
Roe.....	Nov. 4, 1913	Albany.....	Dec. 23, 1913	G-2.....	Do.
Perkins.....	do	South Dakota.....	Dec. 30, 1913	Vicksburg.....	June 25, 1914

VESSELS PLACED IN ORDINARY.

Wisconsin.....	Oct. 31, 1913	De Long.....	Mar. 14, 1914	Du Pont.....	Mar. 17, 1914
Illinois.....	do	Shubrick.....	do	Morris.....	Do.
Alabama.....	do	Tingey.....	do	Bagley.....	Mar. 13, 1914
Panther.....	Nov. 23, 1913	Thornston.....	do	Barney.....	Do.
Olympia.....	Dec. 27, 1913	Farragut.....	Mar. 26, 1914	Biddle.....	Do.
Brooklyn.....	Mar. 2, 1914	Goldborough.....	do	Bailey.....	Apr. 1, 1914
Dahlgren.....	Mar. 14, 1914	Blakely.....	Mar. 17, 1914	Pittsburgh.....	Apr. 18, 1914

VESSELS PLACED OUT OF COMMISSION.

Fox.....	July 5, 1913	Stringham.....	Nov. 21, 1913	Iowa.....	May 23, 1914
Castine.....	Oct. 23, 1913	Manly.....	Apr. 1, 1914	Indiana.....	Do.
Craven.....	Nov. 14, 1913	Gwin.....	Apr. 18, 1914	Massachusetts.....	Do.
Wilkes.....	do	Aylwin.....	Apr. 20, 1914	Potomac ¹	
Stockton.....	do				

NEW COLLIERIES PLACED IN SERVICE.

Proteus.....	July 9, 1913	Nereus.....	Sept. 10, 1913		
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COLLIERS PLACED IN SERVICE.

Hector.....	Feb. 16, 1914	Saturn.....	Apr. 4, 1914	Mars.....	May 8, 1914
Vulcan.....	Feb. 25, 1914	Nero.....	Apr. 29, 1914	Proteus.....	June 15, 1914

¹ Considered from Feb. 14, 1914.

Table showing the changes in status of vessels during the fiscal year ending June 30, 1914—Continued.

COLLIERS PLACED IN RESERVE.

Vessel.	Date.	Vessel.	Date.	Vessel.	Date.
Vulcan.....	July 15, 1913	Nero.....	July 31, 1913	Nanshan.....	Mar. 31, 1914
Mars.....	.....do.....	Neptune.....	Oct. 2, 1913	Nereus.....	June 29, 1914
Saturn.....	July 31, 1913	Proteus.....	Mar. 31, 1914		

COLLIERS PLACED OUT OF SERVICE.

Sterling.....	Aug. 9, 1913	Alexander.....	Aug 9, 1913		
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VESSELS STRICKEN FROM THE NAVY REGISTER.

Alexander.....	Aug. 16, 1913	Craven.....	Nov. 15, 1913	Manly.....	Apr. 2, 1914
Independence....	Sept. 3, 1913	Stockton.....	.....do.....	Gwin.....	Apr. 20, 1914
Restless.....	Sept. 5, 1913	Wilkes.....do.....	Pansy.....	June 19, 1914
Davis.....	Nov. 12, 1913	Stringham.....	Nov. 26, 1913		

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APPENDIX No. 1.

REPORT OF THE HYDROGRAPHIC
OFFICE.

HYDROGRAPHIC OFFICE,
Washington, D. C., August 27, 1914.

To: Bureau of Navigation.

Subject: Report of the Hydrographer for the fiscal year ending June 30, 1914.

1. I respectfully submit the following report of the Hydrographer for the fiscal year ending June 30, 1914.

2. From the beginning of the fiscal year until April Capt. G. F. Cooper, United States Navy, was Hydrographer, and on April 22, 1914, I assumed charge of the office.

3. Under the law it is the duty of the Hydrographic Office to prepare, publish, and furnish nautical charts, sailing directions, and navigators for the safe navigation of the vessels of the Navy and mercantile marine. This duty is considered in this report under the following heads:

- (a) The collection of the necessary data.
- (b) The consideration, compilation, and publication of this data.
- (c) The distribution (furnishing) of the resultant charts, sailing directions, and other navigational publications.

COLLECTION OF NAUTICAL DATA.

4. Nautical charts and sailing directions are based upon original surveys and reports, or upon the reproduction of similar publications issued by foreign hydrographic offices.

5. Under the direction and supervision of the Hydrographic Office the following surveys were carried on during the fiscal year:

In the island of Haiti the U. S. S. *Eagle*, continuing the work of previous years, completed the surveys of Petit Goave, Baradaïres, Cayemites, and Gonaïves Bays, and determined the geographic position of Port au Prince by astronomical observations.

On the south coast of the island of Cuba the U. S. S. *Paducah*, continuing the work of previous years, carried the "Cape Cruz-Casilda survey" from Jucaro to Tunas, including the inland waters as far south as Burgas and Paloma Cays.

The unfortunate conditions existing in Mexico caused the department to withdraw, in April, the *Eagle* and *Paducah* from the above surveys, and assign them to temporary duty with the fleet in Mexican waters. Advantage, however, was taken of their presence at Vera Cruz, and a new survey of that port and approaches was made. The

new chart of Vera Cruz will be issued this year and will fill a much needed want for the safe navigation of that port and vicinity.

The U. S. S. *Hannibal* was engaged in continuing the survey of the east coast of Nicaragua until April, when work in that locality was temporarily discontinued and the vessel transferred to the north coast of Panama to complete the survey of the approaches to the Panama Canal. In April the U. S. S. *Leonidas* was assigned to assist the *Hannibal* and the result of their work will be issued this fall as a new chart of the Caribbean approaches to the Panama Canal, a chart much needed for the safe navigation of the large amount of shipping which will traverse those waters, due to the opening of the canal to commerce.

The topographic survey of the district about the naval station, Guantanamo Bay, Cuba, was continued during the year, and will probably require three more seasons for completion.

The Samoan survey expedition commenced the survey of the island of Tutuila, Samoa, in January and notwithstanding the severe difficulties encountered, has made good progress. This survey party has completed the survey of Pago Pago Harbor and of a considerable extent of the coast line, as well as of much of the triangulation of the island.

Surveys of a number of foreign ports, in more or less detail, have been made and sent to the office from cruising ships temporarily in such localities.

6. The Hydrographic Office not only collects data from which to make the original publication of charts and sailing directions, but also collects the data necessary to keep such charts and sailing directions corrected and accurate to date. In order to carry out this duty it receives, scans, and utilizes charts, sailing directions, notices to mariners, and such other hydrographic reports as may be issued by foreign hydrographic offices, marine reports from thousands of seafaring people the world over, as well as from the Navy, Revenue-Cutter Service, Army Transport Service, Army Engineers, Bureau of Lighthouses, Coast and Geodetic Survey, and Bureau of Fisheries.

7. The 16 branch hydrographic offices furnish to and receive from the maritime world and those interested in nautical matters information, which is transmitted to the main office and issued to all shipping affected. The useful and beneficial service rendered to mariners through and by these branch offices more than fully justifies the small annual expense of maintaining them.

8. To volunteer contributors of nautical information the Hydrographic Office issues directly, or through its branch offices, the Hydrographic Bulletin, the Pilot Charts, and the Weekly Notice to Mariners. They are the rewards given these volunteer observers for furnishing the office with nautical information. It is all important that this source of information should not only be maintained but its scope further enlarged by obtaining additional volunteer observers. That efforts in this latter line may not fail, it is also important that each branch office should be in charge of a naval officer of experience whom the mercantile marine will look to for information and to whom it would naturally give information in return.

CONSIDERATION, COMPILATION, AND PUBLICATION OF NAUTICAL DATA.

9. The Hydrographic Office furnishes to the Navy and the maritime world nautical information, gathered as above outlined, in its weekly publications known as the Notice to Mariners and Hydrographic Bulletin, which relate to the charts and sailing directions of all of the oceans, seas, and Great Lakes, and the preparation of which is assisted by maintaining in the Hydrographic Office complete archive sets of our own and of foreign navigational charts. The Navy and the maritime world are thus furnished with the latest navigational news, and are afforded a complete guide for the correction of charts and sailing directions, whether the same be printed by the Hydrographic Office, the Coast and Geodetic Survey, the British Admiralty, or other authority. This makes these two publications indispensable mediums of information for our navigators, and renders them among if not the most important publications of the seafaring world.

10. The reproduction of British Admiralty and other foreign charts by the process of zincography is now well started, and it is hoped that we may soon be independent of foreign chart makers for the safe navigation of our ships in times of peace or war. The production of these charts by the Hydrographic Office will be a material yearly saving to the Government in stopping the necessity of purchasing them abroad. This saving of funds alone fully justifies the reproduction of foreign charts by zincography, if there were not even the more pressing and important feature of having the plates as our own property.

11. At the end of the fiscal year the Hydrographic Office had on issue the following charts and plans:

Hydrographic Office charts.....	2,068
Coast and Geodetic Survey charts.....	654
British Admiralty charts.....	1,752
Total.....	4,474

It will thus be seen that the Hydrographic Office, until the British Admiralty charts are reproduced in this office, must purchase abroad approximately 40 per cent of the different charts needed for the navigation of the waters of the world. The 1,752 charts which it is necessary to purchase abroad embrace such waters as to stop practically any strategic move of the fleet (unless supplied with such purchased charts) to waters other than those about the American continent. That this weakness and possible menace to the mobility of the fleet may be overcome the Hydrographic Office should be afforded the additional facilities (civil force and adequate appropriations) to enable it to reproduce these charts on zinc plates. Estimates therefor have been heretofore submitted.

THE DISTRIBUTION OF CHARTS, SAILING DIRECTIONS, AND OTHER NAUTICAL PUBLICATIONS.

12. That the Hydrographic Office may be at all times ready to issue, when called upon, charts, sailing directions, navigators, etc., it should maintain on hand, corrected and ready for issue, an ample supply thereof; but the appropriations for the Hydrographic Office

and the force of employees therein have not been increased to keep pace with these growing demands upon it, in spite of the fact that the Navy and the appropriations therefor have both enormously increased since the Spanish War. As a consequence, it has been impracticable to increase the number of charts kept on hand and ready for issue with the rapidity desired.

13. The distribution of charts for ships of the Navy has been carried on by means of station catalogues. These catalogues are based upon an abandoned arrangement of naval stations, the waters of the world being now divided into three naval stations instead of five as formerly. New catalogues for each of the three naval stations will be compiled, edited, and published. This will be done in a modern, systematic manner. There will also be compiled lists of charts for possible strategic moves of the fleet.

STEAMSHIP LANES.

14. The lanes now in use were adopted by the various principal steamship companies on April 15, 1913, and only once during this fiscal year, on account of floating icebergs, from May 27 to the first week of July, were these lanes shifted. It is a matter for careful consideration by all concerned as to whether these lanes should not be made obligatory upon all vessels crossing in or along them. Certainly safety at sea would be enhanced if such were the case, and this question is recommended for favorable action.

ICE PATROL.

15. The revenue cutters *Seneca* and *Miami* alternately conducted the patrol of the southern edge of the ice region from the middle of February to the first of July. These vessels kept in constant communication by radio with vessels passing in their vicinity and with the branch hydrographic office in New York, sending reports of all ice discovered and of its location and drift. This information was given immediate publication upon receipt and also sent out broadcast to all shipping at sea by the radio station at Arlington, Va. All ice reported was also cabled to the Deutsche Seewarte, Hamburg, at their request. The information from the ice patrol and other vessels was also published in the Daily Memorandum and in the Weekly Hydrographic Bulletin from this office and given the widest circulation. The ice patrol has proved a most valuable aid to navigation, and the Hydrographic Office expresses its appreciation of the willing and hearty cooperation of the revenue-cutter patrol vessels and the various merchant steamers in promptly transmitting reports for the timely warning of mariners navigating in the ice localities.

PUBLICATIONS.

16. The publications issued by the Hydrographic Office are numerous and necessary to the maritime public, and to keep them up to date requires constant attention to the thousands of reports coming in from all parts of the world and therefore involve much painstaking and careful work. The edition of the Weekly Notice to Mariners is constantly increasing in size, and the demand for it

becomes greater year to year. The edition during the past year was 331,800 whole notices and 260,000 extracts, although the information published therein was limited entirely to such items for the correction of charts and sailing directions as are absolutely necessary and essential to safe navigation, such as changes in lights, buoys, beacons, wrecks, and shoals. A large volume of miscellaneous information, embracing port facilities, pilot rules, etc., which is of interest to mariners, was omitted owing to the great increase in the notices from foreign countries and changes in the aids to navigation and obstructions developed by new survey work. It is the intention to resume the publication of this information in the near future.

17. The Daily Memorandum comprises the publication of reports affecting the immediate safe navigation of vessels, such as the presence of icebergs, field ice, derelicts, wrecks, missing buoys, etc. This information is also telephoned or telegraphed to the various radio stations and sent out broadcast to all shipping four times daily. Similar action is taken by the branch hydrographic offices at New York, New Orleans, San Francisco, and elsewhere, in the case of reports affecting their portion of our coasts.

18. The Hydrographic Bulletin, issued weekly, contains, in addition to items from the Daily Memorandum, such matter of interest to mariners as tonnage certificates of vessels using the Panama Canal; North Atlantic ice patrol, 1913; North Atlantic ice observation and patrol service, 1914; changes in radio stations applicable to United States naval radio stations opened to public business; South American radio stations; port facilities; opening of radio stations on naval vessels to commercial business; report from British ice scout *Scotia*; questions and answers; currents and courses; time signals and hydrographic information by radio; ice in Chilean channels; telegraph and cable rates; use of oil to calm seas; the Paris-Washington longitude determination; storm warning signals, etc.

19. There are 77 volumes of sailing directions issued by the Hydrographic Office to United States naval vessels, and of these 20 are published by this office, 41 by the British Admiralty, 15 by the Coast Survey, and 1 by Canadian authority. Of the 20 books published by this office, 10 are practically out of date and efforts are now being made to revise them, and it is hoped to gradually rewrite the British Admiralty books, that our Navy may not be dependent upon that source in time of need.

20. During the past year the office has rewritten and published one volume each of the following: Sailing Directions of the West Indies, Cuban Longitude Report, International Code of Signals, General Catalogue of Hydrographic Office Publications, List of Lights of the World, addenda to each of four following volumes of Sailing Directions of the East Coast of South America, North Atlantic Islands, West Coast of South America, and Asiatic Pilot Volume I; and the American Practical Navigator. One additional volume of sailing directions is now practically ready for the printer.

21. The fund allotted for the printing in the Hydrographic Office is entirely insufficient. The cost of printing the Notices to Mariners for the past fiscal year, in spite of every effort to reduce it by cheapening the grade of paper and changing the make-up, was \$12,919.24,

which is more than one-half of the total sum allowed for printing, namely, \$25,000, and leaves insufficient funds for the publication of necessary sailing directions, light lists, addenda, etc. It is requested that the printing allowance of this office be increased to at least \$35,000.

CHARTS.

22. The Hydrographic Office supplies all charts and publications, whatever their character, issued to the vessels of the Navy; it furnishes free of cost to all other Government vessels such of its charts and publications as are requested; and it sells the same at the cost of printing and paper to the merchant marine and public generally.

23. The number of navigational charts published during the year was 100,544, and of Pilot Charts 185,655, and the number purchased from the British Admiralty was 12,667. At the end of the fiscal year the Hydrographic Office was dependent upon the British Admiralty for 1,752 individual charts of various parts of the world, but we are gradually reproducing these by the photolithographic process on zinc plates, and it is hoped that in the near future the office will have its own plates covering all these charts, thereby being independent entirely of the foreign product and consequently able to supply our own Navy and merchant vessels with charts at a much less cost than we are now required to pay. During the past year 199 charts were reproduced by this process, but during the present year it is expected the number will be much larger. There were also completed 13 new engraved charts on copper plates; 37 copperplate and 11 zinc-plate engravings were extensively altered and corrected, and 415 copper and 26 zincographs were altered and corrected in minor respects.

24. *Pilot charts.*—These charts have been published as heretofore, namely, monthly for the North Atlantic, North Pacific, and Indian Oceans and quarterly for the South Atlantic and South Pacific Oceans. A new Pilot Chart of the Central American Waters, covering the approaches to the Panama Canal, is now in process of construction and will be issued beginning with the October number. It is believed this chart will be of great value to the large amount of shipping using the Panama Canal as well as to our growing mercantile marine in the Gulf of Mexico and Caribbean Sea. The Pilot Charts are in great demand by the mercantile marine, and, in addition to the valuable data shown on them, many merchant captains use them as charts for navigating their vessels.

BRANCH OFFICES.

25. The branch hydrographic offices established in 16 of the principal Atlantic, Gulf, Pacific, and Great Lakes ports have continued their useful work of collecting and distributing hydrographic information and endeavoring, as much as their limited personnel permitted, to give every assistance to officers and men of the merchant marine, both data pertaining to the seas traversed and personal instruction in matters pertaining to navigation. These officers have also given lectures and instructions upon nautical subjects and the practice of navigation to officers and men of the naval militia and of the merchant marine service at regular times and upon special

occasions whenever desired, and much benefit has been given through the medium of this practical instruction.

26. Recommendation has been made in the estimates for 1916 for the necessary appropriation to establish branch hydrographic offices in Panama and Los Angeles. The opening of the Panama Canal has made an office there a necessity for the proper collection and distribution of marine data for the safe navigation of the thousands of vessels passing through the canal. It should be, and will be, one of our most necessary and useful offices. The establishment of a branch office at Los Angeles is also much needed to meet the expansion of the shipping facilities of that port, which will grow rapidly as a result of the opening of the Panama Canal. The office to be established at Los Angeles will be the only one between San Francisco and Panama.

27. The branch offices at Norfolk, New York, New Orleans, and Duluth have performed particularly good work, and the results have been far-reaching and effective in furthering maritime interests. The branch office at Galveston has no naval officer in charge, and the officers at Buffalo, Cleveland, and Chicago offices are also assigned to the duty of recruiting officers. This latter is not a desirable arrangement, and it is recommended that an officer be detailed to the sole duty of each branch hydrographic office, as there is plenty of useful work to occupy his entire time in the performance of the duties of the branch office.

28. The branch offices are the distributing points for all nautical information received in the main office and are supplied with outfits of charts and navigational publications kept corrected to date where captains and other officers of naval and merchant vessels of all nationalities may freely inquire for, examine, and obtain the latest data regarding their intended voyages. It is, therefore, never necessary for any vessel to leave port without being able easily to obtain the latest information for properly correcting her charts and sailing directions prior to departing. The popularity of this assistance is shown by the number of seafaring men who have called at the several branch offices during the past year, there having been a total of 37,061.

CHARTS FOR MEMBERS OF CONGRESS.

29. The Hydrographer is constantly receiving requests from Senators and Representatives in Congress for copies of charts, they being under the impression that such requests can be granted, but the existing law prohibits the office from doing so. The Coast Survey is, under the law, permitted to grant such requests, and the declination to do similarly by the Hydrographic Office is misunderstood and, no doubt, considered discourteous. It is recommended that Congress be asked to amend the existing law and authorize the Hydrographic Office to furnish, upon request, not exceeding 10 charts to each Senator or Representative, as is now allowed the Coast Survey.

RECEIPTS FROM SALES.

30. Previous to the fiscal year ending June 30, 1908, the proceeds from the sales of charts and books were turned into the Treasury of the United States to be used "in the further preparation and publication

of maps, charts, navigators, sailing directions, and instructions for the use of seamen." (R. S., sec. 433.) The sundry civil act, section 2, approved June 30, 1906, provided that "no appropriations other than those made specifically for printing and binding should be used for such purposes in any executive department or other Government establishment in the District of Columbia," thus doing away with the authority previously granted. This affects the Hydrographic Office adversely. Its printing allotment is small, while its stock of books, depleted by sales, has to be renewed. The money received from these sales is not available for printing books to replace those sold, and it is recommended that this authority be again granted, as was formerly the case.

EMPLOYEES.

31. The already large increase and constantly increasing amount of work from year to year of the Hydrographic Office makes it necessary that additional employees should be assigned to meet the demands. The increased work is not confined to any particular lines, but is the general growth due to the necessity of meeting the demands of the Navy and mercantile interests the world over, and the present number of employees is inadequate to keep pace with the constant growth of the work. With the rapid increase in the stock of charts and sailing directions, which will soon be more than doubled, an increase in the personnel of the office must follow. In the estimates for the coming year the Hydrographer has recommended a moderate increase in number of employees and their pay, and the particular attention of the department is invited to the fact that the employees of the Hydrographic Office are, in general, paid much less than is paid to employees in other branches of the Government service doing similar work; as, for instance, the Coast and Geodetic and Geological Surveys. These low rates of pay have existed in this office for many years, while in another branch of the Government service (the Coast Survey) the pay of many men doing similar work was two years since considerably increased. It is only just and proper that the employees of this office, who have worked patiently, faithfully, and well, and under adverse conditions, and whose output of work in character and quantity probably surpasses any other branch of the Government service, should be paid equally well, at least, as other employees engaged in similar duty.

Table showing details of work of Hydrographic Office for the fiscal year 1914.

	Appropriated.	Expended.
MAIN OFFICE.		
Salaries.....	\$123,480.00	\$120,798.29
Contingent and miscellaneous expenses..... \$38,500.00		
Received from sales..... 7,120.14		
	45,820.14	\$ 43,419.02
Pilot Chart, North Pacific Ocean.....	2,000.00	\$ 1,947.27
Contingent expenses, Navy Department (allotted).....	310.00	\$ 307.22
Public printing and binding.....	33,000.00	32,350.97
BRANCH HYDROGRAPHIC OFFICES.		
Contingent expenses.....	11,000.00	\$ 9,200.00
Services, necessary employees.....	17,980.00	17,949.33
Total.....	233,350.14	225,972.10

¹ Estimated.

Vouchers and requisitions handled:

1,050 sets of vouchers (estimated).
405 sets of requisitions (estimated).

Correspondence:

Received 17,000 letters (estimated).
Received 698 books and pamphlets.
Sent 5,400 letters (estimated).

DIVISION OF SAILING DIRECTIONS.

32. For a period of about six weeks (in March, April and May)' during the moving and rearranging of the office, the work in this, as in other divisions, was materially delayed and interfered with, and is therefore less than would have been for the full year but for this interruption.

Publications prepared during the year other than Notice to Mariners.....	10
Number of weekly notices.....	52
Number of copies per week.....	6,380
Total number of copies of notices.....	331,800
Total number of extracts from Notices to Mariners (Great Lakes).....	260,000
Number of paragraphs during year.....	4,634

Archive charts.

Foreign charts received (copies).....	2,777
Domestic charts received (copies).....	1,360
Total.....	4,137

There have been transferred from old to new copies of charts about 20,400 corrections, and there have been handled by requisition or for plotting and reference about 10,000 charts. Twenty sets of index charts and catalogues have been kept corrected to date, as well as 1 accession, 1 requisition, and 3 date books.

A great many foreign documents, charts, letters, pamphlets, and books have been examined, extracts made from them, and some of them used in our publications. All foreign notices to mariners received have been examined and have been translated and published in our Notice to Mariners when suitable.

Several pamphlets, as addenda to different Pilots, have been prepared and published, and two volumes of the West Indies Pilot will soon be ready for issue.

The largest work of the year was the complete revision of the American Practical Navigator, which was greatly improved over former editions, and will be a much more useful publication by reason of the many beneficial changes incorporated in the revised edition. A new edition of the International Code of Signals, a volume of the List of Lights of the World, and a new General Catalogue were also issued during the year.

33. DIVISION OF CHART AND BOOK SUPPLY.

CHART SECTION.

Hydrographic Office charts:

Number of charts published.....	212
Number of charts canceled.....	7
Number of charts on issue (engraved).....	1,260
Number of charts on issue (lithographed).....	808
Total.....	2,068

Hydrographic Office charts—Continued.

Number of copies on hand June 30, 1913.....	179,091
Received.....	101,798
Total.....	280,889
Number of copies expended (issue and sales).....	68,216
On hand June 30, 1914.....	212,673
Coast Survey charts:	
Number of charts placed on issue.....	38
Number of charts canceled.....	30
Number of charts on issue June 30, 1913.....	646
Number of charts on issue June 30, 1914.....	684
Number of copies on hand June 30, 1913.....	14,483
Number of copies received.....	31,290
Total.....	45,773
Number of copies expended (issue).....	35,652
Total number of copies on hand June 30, 1914.....	10,121
British Admiralty charts:	
Number of charts on issue June 30, 1913.....	1,927
Number of charts placed on issue during year.....	6
Total.....	1,933
Number of charts canceled during year.....	181
Number of charts on issue June 30, 1914.....	1,752
Number of copies on hand June 30, 1913.....	36,430
Number of copies received.....	12,677
Total.....	49,107
Expended.....	15,062
Number of copies on hand June 30, 1914.....	34,045

Each copy of every chart sent from the office is corrected by hand to date of issue.

BOOK SECTION.

During the year this section has kept corrected to date all Hydrographic Office publications for issue to the naval service and for sale, and has issued nautical books to the number of about 4,869 copies. It had on issue at the end of the fiscal year 130 individual publications.

A total of 50 complete outfits of charts and books have been issued during the year. All new charts and books have been sent to vessels as they have been issued.

34.

DIVISION OF CHART CONSTRUCTION.

New charts published.

Kind.	By Hydrographic Office.	By contract.	Total.
Engraved.....	13	.....	13
Zinco-graphed.....	193	6	199
Total.....	206	6	212

Charts reprinted.

Kind.	Extensive correc- tions.	Minor correc- tions.	Total.
Engraved.....	37	415	452
Zincographed.....	11	26	37
Total.....	48	441	489

Besides the publication of these charts the division has executed a great deal of work of a miscellaneous nature, has published all editions of the Pilot Charts, and has electrotyped 18 engraved chart plates in the electrotyping laboratory of the office.

The total number of copies of charts printed during the year was 286,199.

DIVISION OF PILOT CHARTS AND BRANCH OFFICES.

35. This division has charge of the preparation of all the data for the Pilot Charts, assists the hydrographer in the administration of the branch offices, and has charge of all printing and sales.

PUBLICATIONS.

Daily Memorandum.—Reports affecting safe navigation, such as the presence of icebergs, derelicts, wrecks, and other news of vital interest to mariners, were published daily on this sheet by means of the mimeograph. The number of copies was 308. The Memorandum was sent to each branch office and to the larger ships of the Atlantic Fleet.

In connection with preparing items for this publication, reports of dangers off our coast were telegraphed to the appropriate naval radio station to be sent broadcast four times daily at fixed hours. Similar action was taken by the branch offices at New York, New Orleans, and San Francisco, with reports affecting the waters in their districts.

Hydrographic Bulletin.—This is issued weekly and contains items of general interest to mariners, including the items in the Daily Memorandum. Its average edition was 4,950 copies.

Pilot Charts.—These continued to be of great value to seafaring men, and are looked upon by them as being the best publications of this nature. The office has not been able to prepare the customary nautical articles of benefit to seafaring men for the reverse side of the charts as often as desirable from lack of people to write them.

PRINTING, MAILING, AND SUPPLIES.

The following table is a guide to the mailing lists and size of editions:

Name of publication.	Number of addresses.		Number of copies.	
	Each edition.	Annual.	Each edition.	Annual.
Notice to Mariners (weekly).....	1,417	73,684	6,030	312,560
Extracts, Notice to Mariners (weekly).....	8	410	4,745	246,740
Hydrographic Bulletin (weekly).....	1,464	76,128	5,058	263,016
Corrections to List of Lights (weekly).....	344	17,888	358	18,616
North Atlantic Pilot Chart (monthly).....	1,611	19,332	6,420	77,040
North Pacific Pilot Chart (monthly).....	1,110	13,320	3,373	40,476
Indian Ocean Pilot Chart (monthly).....	605	7,260	1,967	23,844
South Atlantic Pilot Chart (quarterly).....	643	2,572	2,611	10,444
South Pacific Pilot Chart (quarterly).....	616	2,464	2,539	10,156
Total.....	7,818	213,058	33,121	1,003,892

The sum of the second column shows the number of packages mailed from the office during the year. This is exclusive of supplies sent of the branch hydrographic offices.

Charts and books were sold as follows:

Charts:	
Sold (22,955).....	\$5,069. 10
Returned (2,338).....	374. 00
Net (20,617).....	<u>4,715. 10</u>
Books:	
Sold (3,436).....	2,872. 39
Returned (67).....	41. 95
Net (3,369).....	<u>2,830. 44</u>
Total sales (net).....	<u>7,545. 54</u>

Summary of publications issued and sold.

Navigational Charts.....	118,930
Pilot Charts.....	161,960
Notice to Mariners.....	313,560
Notice to Mariners (extracts, Great Lakes).....	246,740
Hydrographic Bulletin.....	263,016
Corrections to List of Lights.....	18,616
Navigational Books.....	8,238
Total expenditures.....	<u>1,131,060</u>

A tabular statement of work done by the branch hydrographic offices during the fiscal year ended June 30, 1914, is appended.

THOS. WASHINGTON.

Tabular statement of work done by the branch Hydrographic offices during the fiscal year ending June 30, 1914.

Character of work.	Atlantic and Gulf coasts.							
	Boston.	New York.	Philadelphia.	Baltimore.	Norfolk.	Savannah.	New Orleans.	Galveston.
Publications distributed:								
Bulletin, Hydrographic.....	20,335	20,456	13,074	2,999	8,011	15,097	4,163	9,073
Daily Memorandum.....	612	25,232	5,658	1,647	5,708	3,014	2,917	2,903
Notice to Mariners (H. O.).....	86,626	30,263	40,307	885	8,698	12,248	13,082	4,046
Pilot Charts.....	5,316	20,416	4,265	1,583	2,006	3,131	7,314	2,506
Reprints of Hydrographic Information.....	256	932	391	208	315	673	2,057	337
Pamphlets (not Hydrographic Office).....	0	287	52	667	441	705	129	127
Reports forwarded:								
Aids to Navigation.....	43	91	18	0	220	14	2	8
Chart reports.....	1	17	6	0	11	1	0	0
Current reports.....	103	1,772	191	81	976	32	591	179
Ice reports.....	325	478	59	9	45	4	3	2
Intention to observe.....	2	53	10	0	366	63	0	40
Oil, use of, to calm the sea.....	0	5	8	2	10	0	8	1
Port Facilities.....	0	46	14	1	13	2	45	2
Reports of Soundings.....	0	30	4	0	6	1	0	0
Rocks or Shoals.....	0	15	2	2	2	4	0	1
Route reports.....	0	10	11	1	8	2	0	1
Wrecks, Derelicts, etc.....	111	811	164	55	188	14	103	63
Unclassified reports.....	1	196	16	2	220	29	68	45
Other work:								
Acknowledgments (Form 24).....	430	1,095	(²)	197	(²)	44	538	390
Circular letters sent out.....	0	2,835	1,120	54	1,425	533	1,557	511
Letters written (not circular).....	53	898	445	47	1,072	256	355	117
Time ball dropped.....	288	(²)	291	300	302	301	(²)	306
Vessels visited.....	462	2,927	159	75	25	184	0	481
Visitors received.....	681	1,932	3,149	3,081	3,082	2,230	1,806	353
Telephone calls received.....	(²)	1,217	(²)	674	(²)	676	770	(²)

Character of work.	Pacific coast.			Great Lakes.					Total.
	San Francisco.	Portland.	Seattle.	Duluth.	Sault Ste. Marie.	Chicago.	Cleveland.	Buffalo.	
Publications distributed:									
Bulletin, Hydrographic.....	3,385	1,494	6,706	2,398	660	2,540	1,990	966	113,337
Daily Memorandum.....	204	631	20	491	399	299	15	(²)	50,750
Notice to Mariners (H.O.).....	21,487	29,690	8,771	49,581	12,000	60,942	67,485	43,611	439,722
Pilot Charts.....	8,783	5,423	3,750	798	251	1,344	1,450	108	68,443
Reprints of Hydrographic Information.....	414	504	18	26	32	15	55	35	6,263
Pamphlets (not Hydrographic Office).....	195	289	301	173	14	147	13	47	3,587
Reports forwarded:									
Aids to Navigation.....	11	13	28	61	0	0	71	2	582
Chart reports.....	6	6	9	0	0	0	0	0	57
Current reports.....	492	114	144	0	0	0	0	0	4,675
Ice reports.....	6	0	6	0	0	0	8	0	945
Intention to observe.....	64	5	15	0	0	0	0	0	638
Oil, use of, to calm the sea.....	2	0	0	0	0	0	0	0	36
Port Facilities.....	89	9	30	4	0	0	0	0	255
Reports of Soundings.....	1	66	86	2	0	0	13	0	210
Rocks or Shoals.....	1	4	3	8	0	0	8	0	50
Route reports.....	12	78	9	0	0	0	0	0	132
Wrecks, Derelicts, etc.....	68	21	23	9	0	2	16	1	1,649
Unclassified reports.....	182	183	14	0	0	0	17	0	972
Other work:									
Acknowledgments (Form 24).....	541	91	102	73	0	0	(²)	(²)	3,501
Circular letters sent out.....	5,731	139	428	580	11	0	(²)	246	15,220
Letters written (not circular).....	527	259	275	631	55	167	348	399	5,904
Time ball dropped.....	303	261	(²)	297	193	271	(²)	283	3,396
Vessels visited.....	473	157	4	68	0	4	0	544	5,563
Visitors received.....	2,367	843	134	5,734	176	6,793	2,915	1,785	37,061
Telephone calls received.....	(²)	1,038	82	(²)	36	5,844	3,775	(²)	14,112

¹ Written.

² Not reported.

³ No time ball.

APPENDIX No. 2.

REPORT OF SUPERINTENDENT OF
NAVAL OBSERVATORY.

NAVY DEPARTMENT,
U. S. NAVAL OBSERVATORY,
Washington, D. C., August 12, 1914.

From: Superintendent, Naval Observatory.

To: Bureau of Navigation.

Subject: Report of the Superintendent, Naval Observatory, for the fiscal year ending June 30, 1914.

Capt. J. L. Jayne, United States Navy, was superintendent until February 11, 1914, when he was relieved by the present superintendent, Capt. J. A. Hoogewerff, United States Navy.

During the year the Naval Observatory has furnished the entire country east of the Rocky Mountains with the standard time at noon, seventy-fifth meridian time, each day, both by telegraph and radio, while the chronometer and time station, navy yard, Mare Island, Cal., has done the same for the country west of the Rockies; vessels navigating the North Atlantic Ocean and the Gulf of Mexico have been furnished standard time twice each day—at noon and at 10 p. m.—by the observatory, through the Navy radio stations, and the same has been done for the North and East Pacific Ocean by the Mare Island Station; navigators, surveyors, and astronomers of this and other countries have been kept supplied with the positions of the heavenly bodies in a form for practical use through the issues of the American Ephemeris and Nautical Almanac, the Nautical Almanac and the Supplement; continuous fundamental meridian observations of the sun, moon, planets, and stars have been kept up throughout the year in order to furnish data to keep the Almanac and Ephemeris up to the highest attainable standard of accuracy; continuous observations have been made with the equatorial instruments of the satellites of the planets, of occultations of stars by the moon, of comets and asteroids in order to perfect the tables of the motions of these bodies; photographs of the sun have been taken each clear day in order to obtain data for the effect of changes in this body on climatic conditions of the earth; the Navy, the Revenue-Cutter and Lighthouse Services, have been kept supplied with nautical instruments, including gyro compasses, the purchase, inspection, repair, and issue of which has been done by or through the Naval Observatory; in conjunction with the French authorities, the Eiffel Tower, and the Navy radio station at Arlington a very thorough set of observations has been made to determine directly by radio the difference of longitude between Washington and Paris, while, at the same time, many stations in this country made use of these

signals to determine their own longitudes with reference to Washington; as much opportunity as has been consistent with the carrying on of the serious practical work of the observatory has been given the public to view the heavens through the instruments; 42 separate buildings constituting this plant have been kept in order, and 65 acres of land, with 8,500 feet of roadway and the accompanying paths, which amount of land is necessary in order that the observations may not be interfered with by vibrations, smoke, or irregularly heated layers of air, have been kept in condition as a park for the use of the public.

The astronomical council, composed of the superintendent and the heads of the departments and divisions, has met at least once each month to discuss the progress of the observatory work, and to make recommendations in accordance with the order constituting it.

The scientific personnel of the observatory has met twice a month, except during the summer, for the discussion of current astronomical topics and the reading of papers by its members and invited scientists.

The specific work accomplished by the different departments and divisions of the observatory is as follows:

DEPARTMENT OF COMPASSES, CHRONOMETERS, AND OTHER NAUTICAL AND SURVEYING INSTRUMENTS, INCLUDING TIME SERVICE.

Commander Edwin T. Pollock, United States Navy, continued as head of the department, and also acted as general storekeeper, with Lieut.-Commander C. T. Owens, United States Navy, as assistant and in charge of the compass office, and the following named assistants in the chronometer room and time service: G. E. Parks until September 24, 1913; L. P. Steele from September 24, 1913, to February 19, 1914; E. C. Bower from February 19, 1914, to end of year; and Machinist W. D. Snyder, United States Navy, from November 26, 1913, to the end of the year.

TIME SERVICE.

The noon and 10 p. m. time signals have been sent out daily, the former over the telegraph lines covering the country east of the Rocky Mountains, and both via the Navy radio station at Arlington, which practically covers the same territory as well as the North Atlantic Ocean. The importance to navigators of these two signals is referred to in a report from a merchant vessel which states that their chronometers have been checked daily from New York to a point 600 miles north of Rio Janeiro when the distance from Arlington was 4,250 miles. The noon signal is also sent by radio from Key West and New Orleans, covering the northern part of the Gulf of Mexico. Since May 7, 1914, a special 10 p. m. radio signal has been sent out from Key West for the benefit of our vessels in Mexican waters. In case of a breakdown at Arlington, the stations at Newport, New York, Norfolk, and Charleston are directed to send the noon signals. In case of appreciable error in the signal it is corrected by sending the signal one hour later. The mean daily error in transmission for the year was 0.055 second and the maximum error 0.36 second, due to a change of rate in the standard sidereal clock, due to recent overhauling.

While the lag, that is the difference of time between the transmission of the signal and its arrival at a distant point is small, it amounts sometimes to some 0.3 second; and, in these days when the signals are being increasingly used by surveyors and astronomers, it is very desirable that more up-to-date sending apparatus be installed and certain return signals arranged for, particularly by radio, in order that the exact time of the receipt of signals may be known and published. This will require a special appropriation. Small radio receiving sets for the time signals are now being used extensively throughout the country by watchmakers, jewelers, and colleges, and have greatly extended the usefulness of the time signals. These receiving sets have proven themselves of practical value, and as they are not very expensive, the number of them is increasing rapidly.

COMPASS OFFICE.

Material in stock pertaining to magnetic compass outfits.—The stock of articles pertaining to magnetic compass outfits has been kept up at the various navy yards sufficient to supply the needs of vessels in service and to equip new vessels delivered during the year. This stock includes compasses, binnacles, and their fittings, peloruses, azimuth circles, compass readers, magnetic instruments, tripods, bars and pintles, supporting tables for magnetic instruments, etc.

The following new articles were purchased during the year for stock, and were inspected at the works of the manufacturers in accordance with instructions issued by the Bureau of Navigation, which were prepared in this office:

Compensating binnacles, Type VII.....	10
7½-inch illuminated card compasses.....	10
4-inch boat compasses and binnacles.....	100

Compass-office inspections and tests.—The following individual parts of new compasses manufactured under contract were examined and tested in the compass office to determine whether they conformed to the standards adopted in respect to weight, magnetic strength, uniformity of needles, condition of jewels, accurate marking and graduation of compass cards, etc.:

Floats for 7½-inch compasses (illuminated card).....	10
Cards for 7½-inch compasses (illuminated card).....	10
Floats for 4-inch boat compasses.....	100
Needles for 4-inch boat compasses.....	214
Jewels for 4-inch boat compasses.....	150
Pivots for 4-inch boat compasses.....	114

The following correctors for Type VI and Type VII compensating binnacles were tested for magnetic strength:

Heeling magnets.....	15
Semicircular corrector magnets.....	900

The following compasses for submarines under construction, purchased by the builders, have been inspected in the compass office during the year and tested for (1) coincidence of north-south line of compass card with magnetic north-south line; (2) directive force; (3) sensibility:

3½-inch periscope compasses.....	17
5-inch compass.....	1

Compensating binnacles and compasses.—The new Type VII compensating binnacles, carrying $7\frac{1}{4}$ -inch compasses of the illuminated card type, which, as stated in the last annual report, have been adopted as standard, have been issued to new vessels commissioned during the year and have been found very satisfactory, according to reports received. The flat card with new graduations, adopted at the same time, has been favorably commented upon by officers who have used it.

Azimuth circles.—A new type of instrument has been designed to replace the present Type III azimuth circle for use with gyro-compass repeaters mounted in pelorus stands. This instrument consists of a telescopic alidade of the type supplied for several years past with the illuminated dial pelorus, the alidade being mounted on a frame similar to the Type III azimuth circle which fits over the rim of the repeater or of the standard $7\frac{1}{4}$ -inch magnetic compass. Two experimental instruments of this type were manufactured at the navy yard, New York, and issued for trial to the *New York* and *Texas*. Reports from these ships indicate that with certain improvements this instrument will be of great value to navigators. An improved Calhoun azimuth telescope which was submitted to the compass office for inspection and test was found to be inaccurate and unsatisfactory in several respects, due principally to optical defects. The manufacturers state their intention of improving the instrument and of again submitting it for trial.

Illuminated dial peloruses.—New specifications have been prepared to replace the present pelorus specifications No. 18P3, dated November 20, 1911. A number of minor changes have been made in accordance with suggestions from the service, and the specifications as revised will conform in all respects to drawings which are now being made at the navy yard, New York, to replace Bureau of Equipment drawings, in use since 1902.

Changes in compass forms.—Form 9, "Inventory of compasses and instruments," has been revised and reprinted. The list of instruments has been brought up to date and certain minor changes made in the instructions for the use of the forms which are printed on the back thereof.

Compass manual.—A book entitled "A Practical Manual of the Compass" was published by the Naval Institute, under date of October 1, 1913. This book has been approved by the Bureau of Navigation as the service compass manual to replace Diehl's "Practical Problems and the Compensation of the Compass," which will not be republished. It was prepared at the Naval Observatory and Naval Academy and is a compilation from various sources, which brings together the best practical material on the subject and puts in one volume what would otherwise have to be taken from several books and many pamphlets. The complex mathematical theory of the deviation of the compass and the derivation of formulæ have been entirely omitted, but the preface to the book calls attention to certain publications carried in the libraries of all ships, which are recommended for a more complete course on the subject.

Compass course.—During the year six officers have been ordered to the Naval Observatory to take the course of compass instruction, and three other officers stationed in Washington have visited the compass office unofficially for a few hours' instruction from time to time. All those who have taken this course consider it of great value,

and it is recommended that more officers be given this opportunity to familiarize themselves with practical compass work on board ship. The course can ordinarily be completed in from 10 days to 2 weeks, but much benefit may be derived from 2 or 3 days spent in the compass office when more time is not available.

The gyro-compass.—Sperry gyro-compasses have been installed during the year on 10 battleships, 1 armored cruiser, and 8 submarines. This makes the total number of vessels now carrying these instruments, 20 battleships, 1 armored cruiser, and 15 submarines. It has been recently decided by the department to install master compasses in duplicate on all battleships of the *Delaware* class and later. Additional equipment for this purpose has been ordered.

The development of this compass continues to be satisfactory. Experience has shown the importance of having officers and men on each ship who are especially instructed and trained in the care and operation of the compass, and much attention is therefore being paid to this feature. Officers and men are sent for one month's instruction to the navy yard, New York, and to the works of the Sperry Gyroscope Co. from all vessels of the fleet during their overhaul periods. The Bureau of Navigation also maintains with the Atlantic Fleet two chief gunners who have been trained as gyro-compass experts and who are charged with duty of inspecting and adjusting these instruments and instructing the personnel in their care and operation.

Routine duties.—The routine duties of the compass office, in addition to those already mentioned, have been continued during the year, consisting in general of the following:

(a) Routine reports from ships and from navy yards regarding the conditions of compass outfits, and reports from ships, giving results of compass work required by Navy Regulations and instructions, have been carefully examined and filed. Letters have been prepared for the bureau calling attention to errors or omissions in these reports or to failure to submit required reports. Separate reports regarding gyro-compasses, their condition and operation, are submitted from vessels once each quarter.

(b) Reports from the service regarding maneuvering and navigational features of ships coming under cognizance of the Bureau of Navigation have been passed upon and recommendations submitted for action to be taken thereon.

(c) The officer in charge of the compass office has consulted with representatives of the Bureaus of Steam Engineering and Construction and Repair in regard to designs of new ships, with reference to navigational features, such as bridge arrangements and the location of magnetic compasses, gyro-compasses, and steering stations.

(d) Requisitions and surveys from ships have been scrutinized and recommendations submitted for action pertaining to compass outfits.

(e) Requisitions and specifications have been prepared as required for purchase of compasses, magnetic and gyroscopic, and of articles pertaining to compass outfits.

CHRONOMETERS.

The annual trial of chronometers and torpedo-boat watches began January 19, 1914, and was finished July 10, 1914. Fifty-four new American and 12 new foreign chronometers were entered in the trial,

and of these 35 American and 9 foreign chronometers were recommended for purchase.

Fifty-five chronometers belonging to the Government, and which had been cleaned and repaired recently, were also in the trial or part of it.

Forty-five standard and 38 hack chronometers were under observation outside of the temperature room during part of the trial.

Eight American and 57 foreign torpedo-boat watches were under trial, and of these 10 foreign were recommended for purchase.

Five torpedo-boat watches belonging to the Government, and which had been cleaned and repaired recently, were also in the trial. Eleven torpedo-boat watches were under observation outside of the temperature room during part of the trial. This makes a total of 204 chronometers and 81 torpedo-boat watches under observation all or part of the time of the trial. In all, during the year, 164 chronometers and 13 torpedo-boat watches were issued to vessels and 166 chronometers and 22 torpedo-boat watches which had been repaired were received back from the various firms. Every effort was made by the Naval Observatory to have a large number of chronometers and torpedo-boat watches submitted for trial, and as a result there were 25 more new chronometers and 19 more foreign torpedo-boat watches under trial this year than last, resulting in 44 new chronometers and 10 new torpedo-boat watches being suitable for purchase. The two principal firms in this country supplied 19 more, and they also exerted themselves in repairing promptly the chronometers sent them for repairs.

The supply of chronometers and torpedo-boat watches is still not equal to the demand to supply vessels in regular service and new vessels with their full allowance and to have any suitable reserve for emergencies or ships in ordinary in reserve. The accompanying tabular statements, Tables I, II, and III, give the data for the chronometers and torpedo-boat watches which attained a trial number of 25 or less in the trial.

The usual work of rating and issuing chronometers and torpedo-boat watches, and of the purchase and trial of deck clocks, comparing and stop watches, has been carried on as heretofore.

NAUTICAL INSTRUMENTS.

The supply of nautical instruments has been kept up to allow for all demands from vessels and from navy yards. These instruments have included those purchased and furnished from the Naval Observatory for navigation, surveying, and aviation, under the Navy Department; for the Lighthouse Service under the Department of Commerce; and for the Revenue-Cutter Service, under the Treasury Department.

In improving navigational instruments, the following have been bought and are to be tried in service:

New sextants, embodying a number of new ideas.

Hand sounding apparatus, the depth being indicated on a dial by the water pressure.

Variable power (6 to 8) prismatic binoculars.

Variable power (15 to 45) ship's telescopes, fitted with a finder.

Repairs to nautical instruments.—Nautical instruments from the Asiatic and Pacific Stations are now being repaired when possible on the Pacific coast. This saves a considerable amount in shipping

charges. The repair shop for nautical instruments at the Naval Observatory has for six months been making repairs to nautical instruments, except compasses, and the cost has generally been much less than contract repairs, while a large amount of time and paper work in effecting the repairs have been saved. The repairs have also been as well or better made than under contract, while the work has been under observation at all times.

But two men have been employed, although a third one is to be engaged, and a fourth one will soon be necessary, owing to many instruments being sent from ships instead of being repaired under contract by the ships or through navy yards.

The following instruments have been overhauled and repaired at the repair shop during the year:

Testing machine for the azimuth circles manufactured.....	1
Azimuth circles.....	10
Aneroid barometers.....	2
Mercurial barometers.....	5
Binoculars:	
Day.....	9
Night.....	10
Prismatic.....	11
Boxes and transporting cases for chronometers and torpedo-boat watches.....	8
Clinometers.....	3
Clocks:	
Deck No. 1.....	59
Deck No. 2.....	38
Deck No. 3.....	3
Boat.....	17
Levels.....	2
Magnetic set.....	1
Sextant mirrors.....	105
Stadimeter mirrors.....	16
Octants.....	18
Three-arm protractors.....	5
Sextants, high grade.....	6
Sextants, surveying.....	43
Spyglasses:	
High-power.....	12
Medium power.....	8
Low power.....	4
Officer of the deck.....	15
Stadimeters.....	5
Transits and theodolites.....	6
Ship's telescope.....	1
Ship's telescope mounts.....	2
Comparing watches.....	3

GENERAL STOREKEEPER.

The head of department of compasses, chronometers, and other nautical and surveying instruments, including time service, has also acted as general storekeeper, with H. G. Hodgkins as assistant. The following is a brief summary of the work of this department during the fiscal year:

Value of stock on hand July 1, 1913.....	\$91, 228. 17
Value of instruments, etc., purchased.....	\$46, 407. 75
Value of instruments, etc., received from yards and vessels.....	\$50, 152. 03
Value of instruments issued.....	\$71, 727. 42
Stock on hand June 30, 1914.....	\$116, 060. 53
Number of shipments made.....	881
Number of instruments, etc., shipped (an increase of 679 over 1913).....	4, 493

DEPARTMENT OF THE NAUTICAL ALMANAC.

The Almanac has continued under the direction of Prof. W. S. Eichelberger, United States Navy.

Mr. C. H. Killian, assistant, resigned on February 17, 1914, and Mr. Henry Shattyn, pieceworker, on March 28, 1914.

Mr. Ralph W. Aston was appointed an assistant on March 19, 1914, and was transferred to the observatory on April 21, 1914.

Mr. Frank Langellotti was appointed an assistant on April 21, 1914, by transfer from the observatory, and Mr. Reuben Weinstein was appointed a pieceworker on March 14, 1914.

The American Ephemeris and Nautical Almanac for 1916 was received from the printer on May 1, 1914.

The Supplement to the American Nautical Almanac for 1914 was received from the printer on November 15, 1913.

The Supplement to the American Nautical Almanac for 1915 and the American Nautical Almanac for 1916 were sent to press in June.

The form of the Nautical Almanac for 1916 has been materially changed from that of former editions in order to supply the navigator with the principal astronomical data which he needs in such shape as to avoid the necessity of elaborate interpolations and to add data enabling him to obtain a more accurate position from his star sights.

The following assistants and pieceworkers were employed in preparing for publication the annual volumes of the American Ephemeris and Nautical Almanac: Assistants James Robertson, Walter M. Hamilton, William T. Carrigan, Arthur Snow, Perez Fisch, Clifford S. Lewis, George F. Crawley, Joseph F. Ritt, Cletus H. Killian, Joseph J. Arnaud, and Frank Langellotti; and Pieceworkers Janet McWilliam, Hannah F. M. Hedrick, Henry B. Evans, George B. Merriman, Henry B. Hedrick, Thomas E. Trott, Arthur Newton, Isabel M. Lewis, Henry Shattyn, and Reuben Weinstein.

The investigation of the orbits of Saturn's satellites has been continued. Over 2,000 positions have been computed of Tethys, Dione, and Rhea, and also the coefficients in the equations of condition to be used in obtaining corrections to the assumed elements; over 300 positions have been computed for Mimas and Enceladus; and nearly 400 Saturnocentric positions for Titan.

The work of obtaining a new orbit of the seventh satellite of Jupiter has been continued intermittently.

A discussion of the R-D correction used in the reduction of the Greenwich observations is in progress.

The correction of the moon's mean longitude for each of the six years 1908-1913 has been determined from occultations made at the Naval Observatory, and the results were published in the *Astronomical Journal* No. 667 of May 19, 1914.

Shortly after the appearance of the "Tables of Mars, astronomical papers prepared for the use of the American Ephemeris and Nautical Almanac," Volume VI, the observed positions of Mars were found to materially differ from the tabular places. Prof. Newcomb from time to time, as opportunity occurred, examined the work upon which the tables were based, but did not locate the cause of the disagreement between observation and theory. A year and a half ago the Nautical Almanac Office recurred to this problem and Dr. Ross was assigned to the task. After a few months' study a promising line of investiga-

tion suggested itself and has been pursued since that time. A number of months will be required to finish the investigation.

The following assistants and pieceworkers were employed on the various pieces of the above-mentioned work of improving the tables of the planets, moon, and stars: Assistants Walter M. Hamilton, William T. Carrigan, Perez Fisch, George F. Crawley, Joseph F. Ritt, Joseph J. Arnaud, Ralph W. Aston, and Frank Langellotti; and Pieceworkers Frank E. Ross, Elizabeth B. Davis, Janet McWilliams, Hannah F. M. Hedrick, Alfred Doolittle, Louis Lindsey, Isabel M. Lewis, Henry Shattyn, and Reuben Weinstein.

DEPARTMENT OF ASTRONOMICAL OBSERVATIONS.

DIVISION OF SIX-INCH TRANSIT CIRCLE.

The personnel of this division consisted of Assistant Astronomer J. C. Hammond, in charge, Assistant Matt Frederickson, Assistant David Rines, to February 1, 1914, Assistant C. C. Wylie, from November 3, 1913, and Miscellaneous Computer Ralph W. Aston, from April 21, 1914.

The fundamental observations, begun on May 15, 1911, have been continued during the year in accordance with the approved plans.

The number of observations secured is as follows:

Clock-stars.....	2, 267
Pole stars, direct.....	332
Pole stars, reflected.....	104
Refraction stars.....	179
List stars.....	3, 647
Inclination stars.....	307
Direct and reflected stars.....	308
Sun.....	130
Mercury.....	38

Total..... 7, 312

The number of determinations of instrumental constants is as follows:

Collimation.....	706
Level (spirit).....	302
Level (nadir).....	930
Marks.....	904
Nadir.....	973
Runs.....	25
Flexure (horizontal).....	14
Flexure (vertical).....	7

Total..... 3, 861

Four observers were employed during December and January and three during the other months. Their duties also covered part of the reductions. The instrument was reversed nineteen times and the stellar focus adjusted four times during the year.

In September the errors of the pivots and the errors of the right ascension and declination screws of the micrometer were measured by Mr. Hammond and Mr. Rines. The results obtained agree well with those of previous measures, showing that there has been no appreciable wear either of the pivots or the screws.

In October the objective and micrometer were interchanged and circle A was rotated $45^{\circ} 6'$ on its axis.

CLOCK VAULT.

The temperature in this clock vault has been maintained practically constant at 84° F. throughout the year. The range of temperature in the clock cases, as shown by weekly readings, has been only 0°.2 F. Riefler clock No. 151 was cleaned in April and was thrown in circuit as the standard clock in place of No. 60 on April 27. The latter clock was cleaned in May. The following table gives the mean daily rate of the standard clock, as deduced by the time service, together with the maximum variation in the rate for each month.

Month.	Mean daily rate.	Maximum variation.	Clock No.	Month.	Mean daily rate.	Maximum variation.	Clock No.
1913.	s.	s.		1914.	s.	s.	
July.....	0.51	0.03	60	January.....	0.52	0.05	60
August.....	.47	.05	60	February.....	.44	.04	60
September.....	.49	.07	60	March.....	.43	.02	60
October.....	.51	.04	60	April.....	.46	.04	60
November.....	.52	.02	60	May.....	.16	.12	151
December.....	.54	.01	60	June.....	.24	.07	151

Total variation in daily rate during the year: .

No. 60.....	s. 0.12
No. 151.....	s. 0.17

DIVISION OF NINE-INCH TRANSIT CIRCLE.

The personnel of this division consisted of Prof. F. B. Littell, United States Navy, in charge to November 11, 1913, after which date Assistant Astronomer H. R. Morgan has been in charge; Assistant J. B. Eppes to February 14, 1914; Assistant Jesse Pawling, Miscellaneous Computer (later Assistant) L. P. Steele, from January 6, 1914, and Miscellaneous Computer Paul Sollenberger from April 21, 1914.

The new zenith distance micrometer screw, received in June, 1913, was examined on the comparator, and found satisfactory. There is no progressive error in the screw and the small periodic error may be represented by the expression:

$$-0''.009 \cos u + 0''.008 \sin u - 0''.005 \cos 2u + 0''.002 \sin 2u.$$

A pipe has been run from the nadir box below the floor to the suction box of the motor blower used for drawing air currents past the upper and outer thermometers. By this means the mercury is kept near the temperature of the air to which it is exposed during a nadir observation and better nadir images are obtained.

The printing chronograph was installed November 11, 1913, in the observer's room adjoining the 9-inch transit circle house. Besides other changes found necessary, this chronograph was rewired and a different system of relays and circuits for working the hammers and control was introduced.

The printed records are free from the confusion of the clock and observer's signals found on the old chronograph sheets and they are read with greater accuracy and in much less time. The printing chronograph replaced the old chronograph from April 1, 1914.

A new micrometer was secured for the north collimator June 22, 1914, and a fine slow motion screw for rotating this collimator in its wyes has been attached.

Observations of the intermediary stars, suggested by the scheme of the Permanent International Committee on the Photographic Chart of the Heavens, were begun August 1, 1913, according to a plan of work approved by the observatory council.

This plan calls for one or more observations on each clamp of: (1) all stars of the American Ephemeris and of Boss's list of 1,059 standard stars culminating at less than 75° zenith distance; (2) all stars of the Backlund and Hough lists of standard stars culminating at less than 70° zenith distance; and (3) all intermediary stars between $+90^\circ$ and -30° declination.

It calls also for observations of clock, azimuth, and refraction stars; of the moon and outer planets; and of stars by reflection.

A card catalogue has been made of the 10,000 stars of the list and about two-thirds of the stars are observed each year.

Except for the moon and azimuth stars, observations are, as a rule, taken with the sun 10° or more below the horizon, and such that the transit threads are seen by artificial illumination.

Each azimuth star is observed an equal number of times each side the pole, the observations falling near the ends of the night; observations of the clock stars are scattered throughout the night; and the standard and intermediary stars are observed coextensively throughout the meridian each night.

About every three hours readings are made on the collimators, marks, nadir level, and nadir.

By the use of two wire-gauze screens, and the cellular variable screen, all stars are observed at approximately the ninth magnitude.

Except the stars within 5° of the pole, which are observed by the eye and ear method, transits are taken over a fixed reticule of 10 threads and recorded by key and chronograph. Two bisections are made with the double threads moved by the zenith distance micrometer screw, and four divisions are read on the circle of which the division errors have been determined.

A reversing prism is used over the eyepiece in all observations, and one-half of each observation is taken with the image direct and one-half with the image reversed.

The absolute personal equations in right ascension, for all declinations, are determined from observations, with the transit circle, of the artificial star of the personal equation machine which moves back and forth, with determinate velocities, at the focus of the north mark lens.

The pivots are measured by an axial microscope; and the flexure is determined from measures on horizontal and vertical collimators.

The number of observations made during the year with this instrument is as follows:

Intermediary stars.....	4,032
Standard stars.....	1,393
Clock stars.....	1,513
Azimuth stars.....	222
Refraction stars.....	128
Miscellaneous stars.....	44
Moon.....	81
Mars.....	21
Saturn.....	16
Neptune.....	12
Total.....	7,462

The number of determinations of instrumental constants is as follows:

Collimation.....	437
Level (nadir).....	602
Level (spirit).....	209
Azimuth (marks).....	600
Nadir.....	596

Total..... 2, 444

And the number of instrumental investigations is as follows:

Flexure.....	13
Runs.....	12
Thread intervals.....	14
Micrometer equivalent.....	11
Spirit-level equivalent.....	3
Personal equation (machine).....	34
Micrometer screw (on comparator).....	1

Total..... 88

The instrument was reversed three times. For seven months there were three observers; and for the rest of the time only two. Thread interval tables have been computed, and the observing books are reduced to April, 1914.

A considerable portion of the computing done in this division has been in connection with the work on this instrument from 1903 to 1913, and two men of the division spent a number of weeks in examining apparatus in the instrument department.

DIVISION OF THE EQUATORIALS.

The personnel of this division consisted of Prof. Asaph Hall, United States Navy, in charge; Assistant George H. Peters, Assistant H. E. Burton, and Assistant C. B. Watts.

Observations were taken with the various instruments, as follows:

TWENTY-SIX INCH EQUATORIAL.

VI Satellite of Jupiter.....	1
Satellites of Saturn.....	97
Satellites of Uranus.....	20
Satellites of Mars.....	28
Occultations of stars by the moon.....	37
Asteroids.....	36
Comets.....	42
Arcs for micrometer screw.....	75
Comparison stars.....	16
Dimensions of rings of Saturn.....	7
Double star.....	1
Instrumental constants.....	3

The satellites of Saturn were taken in pairs, as follows:

Rhea-Titan.....	37
Titan-Hyperion.....	25
Titan-Iapetus.....	35

Of the observations of the satellites of Uranus, 10 were of Uranus-Titania, 8 of Titania-Oberon, and 2 of Uranus-Oberon.

Seventeen measures were taken of Mars-Phobos and 11 of Mars-Deimos. Both Phobos and Deimos were faint and difficult, Deimos being the fainter.

Of the comets, 5 observations were of 1913 b (Metcalf), 5 of 1913 c (Neujmin), 2 of 1913 d (Delavan), 4 of 1913 e (Zinner), 14 of 1913 f (Delavan), 6 of 1914 a (Kritzing), and 6 of 1914 b (Zlatinsky).

Five observations were made of (55) Pandora, 1 of (104) Klymene, 6 of (127) Johanna, 2 of (349) Dembowska, 2 of (415) Palatia, 6 of (537) Pauly, 6 of (624) Hector, 2 of (718) Erida, 1 of (1913 SP), and 5 of (1914 UM).

A number of these asteroids were observed at the request of Rev. J. H. Metcalf, of Winchester, Mass.; (55) and (127) were observed for Prof. D. T. Wilson, of the Case School of Applied Science, Cleveland, Ohio, for the purpose of comparison with tables.

The dimensions of Saturn's rings were measured on two nights, November 21 and December 20, when the seeing was excellent and the Encke Division could be distinguished.

The new filar micrometer constructed by the Repsolds for the 26-inch equatorial was received on August 2, 1913. As it is considerably heavier than the old micrometer, Clark II, it was thought best to have a new tailpiece and drawtube made for attaching the new instrument to the telescope tube. These new parts, together with a new hand ring of larger diameter than the old one, were constructed at the Washington Navy Yard, and were received from the yard on May 28. For the purpose of fitting the new parts properly the end plate of the telescope, with the old tailpiece and drawtube, were sent to the yard on April 22. They were received back on May 16. In this interval the screw of Clark Micrometer II was investigated under the measuring engine.

TWELVE-INCH EQUATORIAL.

With this instrument there were observed 38 occultations of stars by the moon. Usually the same occultations are observed on both the 12-inch and 26-inch equatorials.

During the year, 1,577 visitors were shown through the 12-inch by Mr. Peters. As usual, there were many schools and teachers for whom special nights were arranged, in addition to the regular Thursday nights. In addition to the above, a number of schools were received by Messrs. Burton and Watts.

Asteroid and comet observations taken during the period July-February, inclusive, have been sent to the *Astronomical Journal*. The remaining observations of asteroids and comets have been prepared for publication, together with the positions of Satellite VI of Jupiter secured at the oppositions of Jupiter in 1910 and 1911, and the observations of (433) Eros made in 1912. Also, the occultations have been prepared for publication which were observed during the period June 12, 1913, to June 30, 1914, inclusive. Some progress has been made in the computations connected with the discussion of the observations of the satellites of Saturn secured with the 26-inch at the oppositions 1909-1913, inclusive.

PHOTOHELIOGRAPH.

During the year 158 photographs of the sun were taken, showing spots on 52 days. The spots have been increasing in number during the year, and in the latter part of the year there were several large groups.

Apparently the sun spot minimum took place about the middle of July, 1913.

PHOTOGRAPHIC TELESCOPE.

Forty-six photographs were made during the year of asteroid fields and other objects, as well as several test plates for the adjustment of the lenses.

During the Paris-Washington wireless longitude work one of the two photo-chronographs employed was mounted in the photographic house, and considerable time was given to the development of the records of both the instruments.

DIVISION OF FIVE-INCH ALT-AZIMUTH.

This division has been in charge of Prof. F. B. Littell, United States Navy. On November 11, 1913, the division of the 9-inch transit circle and of the 5-inch alt-azimuth instrument was divided into two divisions, that of the 9-inch transit circle, and that of the 5-inch alt-azimuth instrument. During the year Volume VIII, Publications of the United States Naval Observatory second series, containing the observations made with the alt-azimuth instrument from 1898 to 1907, was printed and distributed.

DIVISION OF THE PRIME VERTICAL TRANSIT INSTRUMENT.

This division has been in charge of Assistant Astronomer George A. Hill.

The state of reductions of observations made with the instrument is as follows:

The observations taken from July 24, 1893, to December 31, 1912, constituting a complete revolution of the moon's node for the determination of a new value of the nutation constant are completely reduced to January 1, 1912, and those taken from January 1 to December 31, 1912, are reduced to apparent place.

The printer's copy is completed to July 20, 1909.

Assistant Astronomer Hill was unable to give any of his time to these reductions during the past year as he was detailed on the longitude determination between Paris and Washington and was fully occupied with the necessary preparation for that up to October 3, 1913, when he went to Paris. He returned in the middle of January 1914, and then continued on the longitude observations and their reductions until the end of the year.

DIVISION OF REDUCTION OF OBSERVATIONS.

The division has been in charge of the executive committee. The personnel consisted of Assistant Eleanor A. Lamson; and Miscellaneous Computers Etta M. Eaton; J. T. Du Pree, jr., until July 4, 1913 (resigned); L. P. Steele until September 17, 1913 (detailed to time service); C. C. Wyhe from August 22 to November 3, 1913 (transferred to 6-inch); J. Saslaw from October 2, 1913, to January 28, 1914 (detailed to time service), and from March 12 to March 31, 1914 (resigned); E. C. Bower from October 28, 1913, to February 19, 1914 (detailed to time service); F. Langellotti from March 11 to April 21, 1914 (transferred to Nautical Almanac); D. Rines from March 16 to April 10, 1914 (resigned); P. Sollenberger from March

23 to April 21, 1914 (transferred to 9-inch); and H. C. Sieber from June 1. In addition, W. H. Sligh was employed from July 1 to 15, 1913, and W. E. Heal from March 2 to June 30, 1914, under temporary appointments.

REDUCTION OF THE 9-INCH TRANSIT CIRCLE WORK, 1903-1911.

The corrections to the preliminary right ascensions, as mentioned in the last annual report—viz, corrections for the finally adopted azimuth of the marks, for the finally adopted clock corrections, and for personality to reduce observations north of the zenith to the same system as those south of the zenith—having been applied to the observations, the mean right ascension has been determined for each star. A systematic examination for errors of reduction or record has been made in all cases where a right ascension differed from the mean by more than three times the probable error.

The printer's copy of the journal of the observations, 1,044 pages, has been checked. The observations covered the period September 3, 1903, to April 10, 1911, and 757 pages, or the observations from September 3, 1903, to October 6, 1908, are ready for the printer and will be known as Volume IX, Part II, Publications of the United States Naval Observatory, Second Series.

REDUCTION OF THE 6-INCH TRANSIT CIRCLE WORK.

The work in reducing the recent observations has been done in cooperation with the observers assigned to the instrument. The reductions in declination through reduced declination have been completed to February 15, 1913. From May 27, 1912, to July 11, 1913, the reductions in right ascension have been started and the azimuth of the marks determined. From February 15 to May 7, 1913, the reductions in both right ascension and declination are in various stages.

REDUCTION OF ALT-AZIMUTH WORK, 1898-1907.

During the year Volume VIII, Publications of the United States Naval Observatory, second series, containing the alt-azimuth work of 1898-1907, has been printed, proof read, and distributed. This volume contains 2 plates, 37 pages of introduction, and 465 pages of observations.

REDUCTION OF THE PRIME VERTICAL WORK.

The mean declinations have been obtained for the observations in 1911 and the apparent declinations for those in 1912.

LONGITUDE WORK, WASHINGTON-PARIS.

The work in reducing the observations has been done in cooperation with the observers. The right ascensions have been determined for the observations made at Washington from October 27 to December 31, 1913, and for the observations made at Paris from January 21 to March 2, 1914. The clock corrections have been assembled and are ready for the discussion of the rates.

LONGITUDE DETERMINATION, WASHINGTON-PARIS.

Two small observing houses, one for the American and one for the French party, of galvanized-iron louver work, were built for the longitude work. Each one has a massive concrete pier for the transit instrument and a pier for the meridian mark lens. Each roof rolls off in two sections, one to the east and one to the west.

Two new instruments were made by G. Prin, of Paris, for this work. They are of 3 inches aperture and 33 inches focal length, with self-registering right-ascension micrometers, driven by electric motors, but controlled by hand, and the instruments are reversible on each star. One instrument was delivered in Washington in October; the other was delivered in Paris about the same time.

The longitude work was done in duplicate, there being a French and an American party at each end. Work was begun October 27 and the first half was ended on December 31. There was then an interchange of parties and instruments, and work was resumed on January 21 and continued until March 7.

The nights on which satisfactory radio signals could be observed were fewer than had been anticipated. There will be about 12 nights available on which there were sufficient astronomical observations at each end and satisfactory reception of radio signals. Both at Paris and at Washington the standard Riefler clocks of the observatories were used in the observations, and, as their rates are very good at both places, it may be feasible to utilize nights when astronomical observations were not possible by interpolating the clock corrections for a moderate interval.

The reduction of the observations is well advanced, and it is expected that the results will be available for publication in the near future, and will constitute the first direct determination between this observatory and Europe.

The officials of the Paris Observatory kindly loaned the observatory a transit instrument for several months previous to beginning the work, for practice, and offered many valuable suggestions based on their previous experience in similar longitude work. The officials of the Eiffel Tower and of the Radio (Va.) stations, cordially cooperated in the work. Prof. H. Abraham, of the Sorbonne, cooperated with photographic registration apparatus of his own design, and also loaned two special chronographs, also of his own design, for the rapid and accurate measurement of lags.

Ten American observatories took advantage of the opportunity and made the necessary observations to determine the longitudes by the use of the radio signals sent out from Radio, Va., for this work.

The American personnel connected with this work was as follows: At Washington, for the first half, Prof. F. B. Littell, United States Navy, and Lieut. W. T. Mallison, United States Navy, astronomical observers, and Ensign H. E. Saunders, United States Navy, and Ensign R. A. Lavender, United States Navy, radio observers; at Paris, Assistant Astronomer G. A. Hill, and Lieut. C. W. Magruder, United States Navy, astronomical observers, and Lieut. R. B. Coffman, United States Navy, and Ensign G. S. Gillespie, United States Navy, radio observers. For the second half the parties exchanged places.

The French observers at Washington for the first half of the work were Astronomer M. Simonin, astronomical observer; Lieut. C. Gignon, of the Navy, and Capt. A. Carrier, of the Army, wireless observers; and Prof. H. Abraham, photographic observer; and at Paris, Astronomer E. Viennet, astronomical observer, and Ensign P. Auverny, wireless observer. These parties exchanged places for the second series, but their instruments were not interchanged.

One of the houses erected for the Washington-Paris longitude work is now being used by observers from the United States Coast and Geodetic Survey in the work of determining the longitude between here and Far Rockaway and between here and the Harvard College observatory. This is a link in the trans-Atlantic determination of the difference of longitude between Washington and Potsdam, Germany, being made by cable via the Azores.

LIBRARY.

Mr. W. D. Horigan continued as librarian throughout the year.

	Volumes.	Pamphlets.	Total.
Contents of library July 1, 1913.....	27,296	5,452	32,748
Accessions:			
By purchase.....	315		315
Through exchange.....	334	102	436
Copyright duplicate transferred from Library of Congress.....	1		1
Contents July 1, 1914.....	27,946	5,654	33,600

The following publications were printed:

	Copies.
Annual Report of the Naval Observatory, 1913.....	1,200
Publications of the United States Naval Observatory, second series, Vol. VIII..	800
American Ephemeris and Nautical Almanac, 1916.....	1,300
American Nautical Almanac:	
1914.....	300
1915.....	900
Supplement to American Nautical Almanac, 1914.....	1,002

There were distributed 4,233 copies of the publications of the astronomical department and 5,450 copies of the publications of the Nautical Almanac Office, making a total of 9,683 copies.

CONDITION OF MATERIAL.

All instruments are in good condition and available for any appropriate work.

The 42 separate buildings constituting the Naval Observatory plant are, in general, in good condition; but most of them were built over 20 years ago, some of the wood is rotting, and the buildings require constant attention and paint in order to properly preserve them. The copper and other roofs require going over each spring, and the electric wiring is so much out of date that the buildings would not be accepted as a risk by insurance companies.

The grounds are constantly improving in condition and the Observatory Circle is now complete with the exception of 6.764 acres lying north of Observatory Lane, on the Georgetown side of the circle,

belonging to the Industrial Home School, and 3,848.57 square feet of the Normanstone tract, lying southeast of the center of the circle, the acquisition of which will require an appropriation of \$4,041.

The Government owns 14.449 acres to the eastward of the southern junction of Massachusetts Avenue with the Observatory Circle highway, which is entirely unimproved.

There are some 7,500 cubic yards of grading to be done just south of the eastern Massachusetts Avenue entrance, made necessary by the cutting down there of the city highway forming part of Observatory Circle.

The 8,500 feet of road, particularly that part from Massachusetts Avenue to Wisconsin Avenue, is being more and more used by the public, and heavy automobiles going over it make constant repairs necessary. The most traveled parts should be resurfaced, and oiled in the spring.

J. A. HOOGWERFF,
Captain, United States Navy.

OPERATIONS OF THE NAVAL MILITIA.

DIVISION OF NAVAL MILITIA AFFAIRS,
Washington, D. C., September 1, 1914.

From: Officer in charge of the Division of Naval Militia Affairs.

To: The Secretary of the Navy (via Bureau of Navigation).

Subject: Report on the organization, system of training, etc., of the Naval Militia from January 1, 1913, to July 1, 1914.

1. The following report on the organization, system of training, etc., of the Naval Militia, with recommendations for the improvement of the same, is submitted. This report covers a period of 18 months, from January 1, 1913, to July 1, 1914, but hereafter reports will be made covering a fiscal year.

2. From January 1, 1913, until October 3, 1913, the Office of Naval Militia was in charge of Commander C. M. Stone, United States Navy.

On October 3, 1913, Commander C. M. Stone, United States Navy, was relieved by Commander F. B. Bassett, jr., United States Navy.

Lieut. Commander J. C. Kress, United States Navy (retired), reported for duty as assistant to the officer in charge on February 4, 1914, and was detached from this duty on May 12, 1914.

Ensign Francis G. Blasdel, United States Navy (retired), reported for duty as assistant to the officer in charge on May 11, 1914.

3. An "Act to promote the efficiency of the Naval Militia, and for other purposes," became a law on February 16, 1914. This will be known as the Naval Militia act.

4. In accordance with the Naval Militia act, the Division of Naval Militia Affairs was established on April 12, 1914, by General Order No. 93.

5. The Division of Naval Militia Affairs, as a result of this general order, on April 12, 1914, took over all work formerly performed by the Office of Naval Militia.

6. This division now operates under the Bureau of Navigation, but it is recommended that it be made separate and distinct from any of the bureaus of the department, and put under the Secretary of the Navy. At present all communications to all bureaus are routed through the Bureau of Navigation, resulting in delays that it is believed would be curtailed to a large extent if communications were sent direct. As this division has dealings with all bureaus, the advantage of not having it under any one bureau can readily be seen.

An additional reason for the transfer of this division to the Office of the Secretary is that the appropriation "Arms, uniforms, equipment, etc., Naval Militia," can be expended only by the authority of

the Secretary of the Navy, and it is recommended that the appropriation "Arming and equipping the Naval Militia," now carried as an appropriation under "Bureau of Ordnance," be transferred to "Contingent, Navy," thus placing it under the Office of the Secretary.

7. Even during the short time of the fiscal year 1914 remaining after the passage of the Naval Militia act the increase in the efficiency of the Naval Militia was marked.

8. By this act the Naval Militia was placed, to a large extent, under the supervision of the Navy Department.

9. Inspections of the different organizations were made by officers of the regular service, during the month of June, 1914, in accordance with section 11 of the Naval Militia act. The reports of these inspections show that the Naval Militia was, with the exception of two divisions of South Carolina, qualified to participate in the allotment of Federal funds, in accordance with the terms of the Naval Militia act.

10. The appropriation of \$200,000 for arms, uniforms, and equipment enabled this division to supply many organizations with more or less complete equipments of arms, and also to supply the more urgent demands for other material, the issue of which will increase the efficiency of the Naval Militia. A number of States have been furnished with target rafts, night signal sets, loading machines, clothing, ammunition, etc. For the present, this appropriation will suffice for the upkeep of the material and equipment now in possession of the Naval Militia, and for the gradual supply to each organization of new equipment. The lack of adequate equipment has been a drawback to Naval Militia development heretofore, but it is expected that the partial elimination of this defect will cause improvement along all lines within the next year.

11. The Naval Militia act also provides for the pay, transportation, and subsistence of the Naval Militia during such times as the officers and men are actually engaged in any cruise afloat, or encampment on shore, prescribed or authorized by the Secretary of the Navy; such payments to be made from the annual appropriation of \$125,000 for arming and equipping the Naval Militia, in the annual appropriation for the Navy. This appropriation will fill a long felt want, as it will enable longer cruises to be made, and will not place the whole burden of pay, transportation, and subsistence on the States. The appropriation is much too small for the Naval Militia at its present strength, and it is estimated that it should be increased to \$250,000 for the fiscal year 1916.

12. The Naval Militia act provides that officers and men of the regular service may be assigned to duty as inspector-instructors of the Naval Militia. It is recommended that these inspector-instructors be detailed as soon as such officers are available. In many cases officers in charge of branch hydrographic offices, officers on inspection duty, officers on recruiting duty, and others should be able to perform the duty of inspector-instructors in addition to their present duty, but in several cases, especially in districts remote from offices under the Navy Department, the use of retired officers could be advantageously made.

In the meantime officers on duty in Branch Hydrographic Offices and on Recruiting Duty have been assigned temporarily to duty in

connection with the Naval Militia in their vicinity, and have proved of great benefit.

13. Several divisions were organized and a number disbanded during the year. On the whole, the Naval Militia increased in numbers, and from the interest and enthusiasm aroused by the passage of the Naval Militia act it is expected that the increase will be even more marked during the coming year.

14. The disbanding of a number of divisions came as a direct result of the order for the Federal inspections, presumably because these divisions were not in a condition to pass the inspection. An exception to this was the Naval Militia of Indiana, which organization lapsed as a part of the Naval Militia, due to the fact that it was composed entirely of students of the Culver School, who, on account of their age, could not conform to the Naval Militia act regarding the age limits of persons eligible for duty as naval militiamen—that is, from 18 to 45.

15. It is apparent from the returns of personnel of the Naval Militia of June 30, 1914, that several organizations are too heavy with officers and petty officers and that in many cases the rank of the officers is too high. Recommendations to remedy this will be submitted by the board, of which Capt. W. A. Gill, United States Navy, is senior member.

16. During the year an inspection was made of the engineering departments of most of the vessels of the Great Lakes, and in general these departments were found to be in very good condition.

17. A great deal of commendable repair work has been done by the personnel of the Naval Militia during the year, the following deserving special mention:

(a) Overhauling and putting the U. S. S. *Adams* in cruising condition, by the First Battalion of New Jersey, under command of Commander Peters, of the New Jersey Naval Militia, after that vessel was turned over to the State of New Jersey for use as a station ship only, and not as a seagoing vessel.

(b) Retubing the condensers of the U. S. S. *Machias*, by the Naval Militia of Connecticut.

(c) Retubing the boilers of the U. S. S. *Somers*, by the Naval Militia of Maryland, as such repairs became necessary.

18. Much ship repair work has been done by the Naval Militia organizations, and the undertaking and successful accomplishment of such work speaks well for the enthusiasm and efficiency of these organizations.

19. A great deal of trouble is caused by the failure of some States to account for Government property satisfactorily, and also by failure to answer correspondence promptly, if at all. This is caused primarily by the fact that the officers of the Naval Militia in most cases have to carry on their own correspondence, and consequently have to take time from their business for this purpose. This is a hardship that should not be expected of them, and it is recommended that at least one competent yeoman be assigned each ship loaned to the Naval Militia. The Bureau of Navigation has signified its intention of detailing a yeoman to each Naval Militia vessel to assist in the clerical work, and it is hoped that the bureau can see its way clear to make these details at an early date.

20. In addition to this detail, it is recommended that yeomen be assigned organizations to which vessels have not been loaned, as the clerical work involved is not only heavy, but unfamiliar to those who are obliged to handle it.

21. Although the vessels loaned to the Naval Militia of the various States to which they are assigned are well distributed, there are several States to which no vessel is assigned. Wisconsin has never had a vessel, and it is recommended that a suitable vessel be assigned this State as soon as one is available.

22. In this connection it is urged that the recommendation of the general board to assign some of the older battleships now in reserve commission to the Naval Militia of certain States be adopted. The plan is for the *Illinois* to be taken to Brooklyn with her present reserve crew, which is to be augmented by the Second Battalion of the New York Naval Militia; for the *Maine* to be taken to New York and manned by her present reserve crew and the First Battalion New Jersey Militia and the First Battalion New York Naval Militia; for the *Alabama* to be taken to Boston and manned by her present reserve crew and by the Naval Militia of Massachusetts; for the *Kentucky* to be moored in the Delaware River and manned by her present reserve crew and by the Second Battalion New Jersey Naval Militia and the First Battalion Pennsylvania Naval Militia. In making this recommendation it is understood that the ship is to have the same reserve complement of officers and enlisted men of the regular Navy as at present while loaned to a State for Naval Militia duty.

23. In several cases during the year, where vessels loaned to the Naval Militia have been withdrawn from the Naval Militia, the Board of Inspection and Survey for Ships has made reports showing that these ships were in poor condition. Though it is not the policy of this division to condone the lack of care shown by the Naval Militia in such instances, it is felt that the blame is not entirely with the Naval Militia, but is due in part to shortage of ship keepers furnished by the Navy Department.

24. As the Naval Militia is a purely volunteer organization made up of business and working men, the time they are able to devote to Naval Militia matters is necessarily limited, and what time they can give they should devote to drills and the details of the naval profession, and they should not be expected to spend much time scaling bilges, painting double bottoms, or in repairing material. Ship keepers were assigned to the vessels loaned to the Naval Militia to care for the material, but they were not sufficient in number to do the work satisfactorily. During the last part of the fiscal year the number of ship keepers was increased in some cases from 6 to 10, and although this will help, this number will not prove sufficient. The question whether vessels loaned to the Naval Militia should be loaned "outright" or in "reserve commission" is now being considered, among other matters, by the board of which Capt. Gill is senior member. As the Naval Militia act provides that the enlisted men assigned to vessels loaned to the Naval Militia are to be in addition to those allowed by law for the Navy, these assignments will not take away from the complement of the vessels of the regular service.

25. Ship keepers assigned to vessels loaned to the Naval Militia have been changed on too short notice, causing confusion and some-

times loss of property, for which the responsibility could not be fixed. It is recommended that a ship keeper be not detached until a reasonable time after his relief has reported.

26. Nearly all organizations took part in summer cruises during the year 1913.

27. Several adverse comments on the personnel of the Naval Militia were received from officers of ships of the Regular Navy making cruises with the Naval Militia, but in general the personnel was commended for its intelligence, aptitude, and efficiency.

28. The necessity for having an officer of the Navy make the cruises with the Naval Militia on vessels loaned to the States has been emphasized. When officers are to make these cruises it is strongly recommended that they be ordered to report at least two or three days before the commencement of the cruise, in order that they may give instruction regarding the routine of drills, assist in making plans for the cruise, and in making out the watch, quarter, and station bills. Officers of the Regular Navy are necessary on vessels cruising with the Naval Militia not only on account of the valuable instruction the Naval Militia receives, but also because of the reports these officers are required to make, which are of the greatest value to this Division in ascertaining the defects of the different organizations.

29. Target practice for the year 1913 was held by most of the organizations, and on the whole the results were satisfactory.

30. With the idea that greater knowledge of target practice would be gained by observing the method of training the gun crews of the Regular Navy for target practice, authority was granted for officers of the Naval Militia to cruise with the fleet at any time convenient to them, and preferably immediately preceding target practice. It is greatly desired that officers of the Naval Militia, and particularly the ordnance officers, avail themselves of this privilege and take advantage of the opportunity to learn by personal observation the methods of the Regular Navy in preparing for and conducting target practice.

31. In this connection the following-named officers requested and were given orders to witness the target practice of the Atlantic Fleet in the spring of 1914, with pay of their corresponding rank in the Regular Navy during the time they were on this duty, and with mileage to and from their homes.

Bolton, T. B., commander, Naval Militia of Ohio.
 de la Reintre, H. R., jr., ensign, Naval Militia of New Jersey.
 Soper, B. J., lieutenant, Naval Militia of New Jersey.
 Hoefer, W. R., ensign, Naval Militia of District of Columbia.
 Raff, L. E., lieutenant, Naval Militia of New York.
 Flinken, C. E., lieutenant (junior grade), Naval Militia of New York.
 Dickinson, L., ensign, Naval Militia of New York.
 Ketcham, B. S., ensign, Naval Militia of New York.
 Browne, H. W., ensign, Naval Militia of New York.
 Summers, A. M., lieutenant, Naval Militia of Massachusetts.
 Lundy, C. B., lieutenant, Naval Militia of Michigan.
 Stephenson, G. T., commander, Naval Militia of Michigan.
 Kelly, C. W., lieutenant commander, Naval Militia of Minnesota.
 Pappendick, G. F., lieutenant (junior grade), Naval Militia of North Carolina.
 Sanders, A., ensign, Naval Militia of North Carolina.
 Small, R. W., ensign, Naval Militia of North Carolina.
 Rutter, L. R., lieutenant, Naval Militia of Illinois.

32. Twenty-one officers and a number of enlisted men of the Naval Militia made the Mediterranean cruise with the Atlantic fleet during the months of November and December, 1913.

33. Several officers of the Naval Militia performed duty on board ships of the regular service at other times during the period covered by this report.

34. The Naval Militia general board, consisting of five officers of the Naval Militia, as provided by section 17 of the Naval Militia act, has been appointed by the Secretary of the Navy. The board is composed of:

Commodore R. P. Forshew, Naval Militia of New York.

Capt. E. A. Evers, Naval Militia of Illinois.

Capt. C. D. Bradham, Naval Militia of North Carolina.

Commander J. M. Mitcheson, retired, Naval Militia of Pennsylvania.

Lieut. J. T. McMillan, Naval Militia of California.

This board has not been in session as yet, but it is expected to convene it in the near future to confer with the board, of which Capt. Gill is senior member. It is expected that this Naval Militia general board will convene as often as the occasion demands, but there should be at least one meeting a year.

35. It is very important in drawing up rules for the Naval Militia that the Naval Militia itself be freely consulted and its advice obtained, and this will be the policy of this division.

36. It is to be regretted that advantage has not been taken of the compass course at the Naval Observatory. Authority has been granted for line officers of the Naval Militia to take this course at their convenience, and the advantages to be gained are great. No officers of the Naval Militia have availed themselves of the privilege during the past year, and the reason for this omission has not yet been learned.

37. The Tactical Signal Book for the Naval Militia and the Gun-ner-y Instructions for the Naval Militia were compiled, and both books issued to the Naval Militia service.

38. Owing to the fact that the Marconi radio sets rented for the use of Naval Militia vessels have not proven entirely satisfactory, and as the rental was considered exorbitant, these sets have all been removed. The Bureau of Steam Engineering is endeavoring to supply these vessels with Navy sets as rapidly as possible.

39. In accordance with the Navy Regulations, officers' messes will be held responsible for loss and breakage of Government mess gear issued to them.

40. During the floods in the Mississippi and Ohio Valleys the Naval Militia of the States of Missouri, Ohio, Illinois, and Indiana were called out for duty, and the reports indicate that they did excellent service in saving life and property.

41. Lieut. Commander R. A. Abernathy, United States Navy, during the period covered by this report has taken the officers of the Massachusetts Naval Militia out frequently for instruction in navigation on the U. S. S. *Rodgers* on Saturday afternoons and Sundays. The results obtained have been very encouraging, and it is to be regretted that it has been impossible to give more instruction along these lines to the Naval Militia of all States. The assignment of inspector-instructors will make this possible for the Naval Militia of the States

having small vessels assigned them, and it is recommended that all officers of the Naval Militia take advantage of every opportunity for such instruction.

42. Typhoid prophylactic will be furnished all organizations on application to this Division, and it is recommended that all officers and men take this treatment as a preventative against typhoid fever. The inoculation with this prophylactic has proved of great benefit to the Army, Navy, and Marine Corps.

43. Some States have started schools of instruction in accounting systems and are making good progress.

44. Some organizations have regular schools of instruction in all professional subjects and the results obtained have been highly satisfactory. The efficiency of these schools will be greatly increased by the assignment of inspector-instructors.

45. On May 22, 1914, a board of naval officers was appointed by the Secretary of the Navy for the purpose of formulating examinations for officers and enlisted men of the Naval Militia, etc. Capt. W. A. Gill, United States Navy, is senior member of this board. This board is now in session in Washington and is endeavoring to solve the many perplexing problems confronting the Naval Militia.

46. A list of professional books and publications has been compiled for the use of the Naval Militia, and the books are to be issued in the near future to each division. This list will be added to from time to time as the need of additional books becomes apparent.

47. The provisions of the Naval Militia act have resulted in a great increase of the work of the Division of Naval Militia Affairs, the proper execution of which is beyond the capacity of the present clerical force, and an additional number of clerks is recommended.

48. This division carries on correspondence with 22 organizations, consisting of 130 divisions, with a total personnel of 596 officers and 7,132 enlisted men. In addition to this there are 31 vessels at present loaned to the Naval Militia, and the amount of consequent clerical work is large.

49. The following is a conservative estimate of the office force of the division necessary for the efficient handling of the work at the present time:

- 1 officer in charge.
- 2 officers, as assistants.
- 1 chief clerk.
- 2 clerks for filing, etc.
- 6 other clerks.
- 1 messenger.

50: Due to the increase in the work, the two small rooms now assigned this division are much too small, and at least two more rooms of the same or larger size should be assigned. At present the quarters are so crowded that it works a hardship. These two rooms now occupied were assigned when this division consisted of one officer, one chief clerk, one clerk, and one messenger. With the present office force it is apparent that the quarters are inadequate and something should be done to relieve the situation.

51. In March, 1914, the annual convention of the Naval Militia of the United States was held at Washington, D. C. Of the 23 organizations then existing, there were present representatives of

all States except California, Florida, Louisiana, South Carolina, State of Washington, and Wisconsin. It is regretted that these States failed to send representatives to this important meeting, especially in view of the fact that the Naval Militia act had passed only a short time before and at it was known that many important features were to be considered at this convention. It is hoped that next year a much larger number of officers of the Naval Militia will attend and that every Naval Militia organization will be represented. During this convention the Naval Militia act, which had just become a law, was thoroughly discussed and suggestions were made as to the method of putting the law into effect. These suggestions have proved of great value to the Division of Naval Militia Affairs in the execution of the provisions of the Naval Militia act.

52. The annual dinner of the Naval Militia Association at the Willard Hotel was both an agreeable and an instructive gathering. The Secretary of the Navy was present and addressed the assemblage. Many prominent naval officers were also present. This annual meeting and dinner tend to bring the Navy and the Naval Militia in closer touch and are very desirable.

53. The following are the principal points that were brought out at this convention of the Naval Militia:

(a) The president of the Naval Militia Association reported that the strength of the Naval Militia had increased during the past year about 300.

(b) That no new organizations had been formed, but new divisions had been organized—one in Minnesota, one in Michigan, and one in Wisconsin, two in New York, and one in the State of Washington.

(c) That the passage of the Naval Militia act imposed new obligations on the Navy Department and on the Naval Militia which required the earnest cooperation of both services.

(d) That the Navy Department should set a reasonable physical and professional standard under the terms of the act for officers and men. That the standard of the professional examination for officers of the line as laid down in General Order No. 2 of the adjutant general's office of the Commonwealth of Massachusetts of February 1, 1907, be considered a maximum examination for officers of the Naval Militia, and that three years be allowed for the officers to comply with the requirement. That a passing mark of 75 per cent be set in these examinations when held, and when any officer makes 75 per cent he will be considered as qualified in his grade. That any officer who fails to attain 75 per cent shall be given an opportunity for a reexamination within a year, and that if he passes the reexamination he shall be considered as qualified. Pending his re-examination, of course, his status as a Naval Militia officer to remain the same as if he had not taken the examination, for the reason that the status of Naval Militia officers as State officers is a matter of which their respective States have entire control.

(e) That a sufficient number of inspector-instructors should be appointed by the Navy Department for each State to inspect and instruct all the Naval Militia of that State. That the governor of each State would be requested by the Naval Militia authorities in each State to ask the Navy Department for inspector-instructors under the terms of the Naval Militia act, as it is apparent that the initiative should be taken by the governors and not by the Navy Department.

(f) That the standards for examination under section 21 of the act should be established by the Navy Department.

(g) That the unit of organization provided for in the Naval Militia act, section 2, should be established by the Navy Department as soon as possible. It was the opinion of the meeting that this "unit of convenient size" should be a minimum of 40 officers and men, and that no maximum be set; that the maximum number in the unit and the number and rating of the petty officers be left to the discretion of the Navy Department, with the recommendation that the Navy Department consider the various local conditions under which each organization exists.

(h) That a suitable type of vessel for the Naval Militia be designed, and that the Navy Department be requested to build some of these for the use of the Naval Militia, in view of the fact that vessels available for loan to the Naval Militia are few in number and obsolete in character.

(i) That the Division of Naval Militia Affairs should be independent of any bureau and put under the Office of the Secretary of the Navy.

(j) That the complement of ship keepers on vessels loaned to the Naval Militia be increased.

(k) That a more systematic form of target practice for the Naval Militia is necessary. That the desire to improve the target practice and put it on a competitive basis is approved, with the understanding that the scheme should be so arranged that it will meet the needs of the different organizations, which exist under entirely dissimilar conditions, as they do, using different caliber guns and different ships, and be fair to all. That some form of small-arm competition should be instituted, and that it should be kept separate from the great-gun competition, but that no competition between States for small-arm practice is recommended at this time.

(l) The organizations of the different States were discussed and reported upon by the representatives of each State present.

(m) That yeomen should be detailed to each ship loaned to the Naval Militia in addition to the present detail of ship keepers.

(n) And that the department be consulted as to the advisability of sending the Naval Militia of the various States on regular naval vessels that go through the Panama Canal on the occasion of the official opening.

54. In summing up, this division considers that the principal defects of the Naval Militia are as follows:

(a) It is believed that some organizations are inclined to regard the Naval Militia as an infantry organization only. The Federal Government makes appropriation for the purpose of training officers and men of the Naval Militia primarily for naval duties, and this should always be borne in mind. A necessary amount of infantry drill is desirable, but the ultimate use of the Naval Militia as a Federal asset to the Navy in time of war should never be forgotten.

(b) Failure of the Naval Militia to answer letters is the cause of much embarrassment to this division. As many as five letters have been written in order to secure a reply. It can be readily seen how this handicaps the small clerical force of this division.

(c) Failure of the Naval Militia to read correspondence causes unnecessary letters, and the transaction of business is thus delayed.

(d) Correspondence should all come through The Adjutant General. This rule is frequently violated.

(e) All letters and telegrams to the Division of Naval Militia Affairs should be addressed to the "Division of Naval Militia Affairs, Navy Department, Washington, D. C.," and not to any officer by name.

(f) General lack of instruction and the lack of proper textbooks is the crying need of the Naval Militia. Inspector instructors will be ordered to all organizations in the near future and a complete list of textbooks will shortly go forth. It is hoped that great benefit to the Naval Militia will ensue.

(g) Requisitions are not submitted in time to anticipate needs; this is particularly noted in the case of coal.

(h) Carelessness in the care of Government property, as evidenced by the large number of surveys involving thousands of dollars, should be checked. The property belongs to the Government and it should be properly cared for, and accounted for.

(i) The details of many of the important drills, such as fire drill, collision drill, boat drill, sail drill, abandon ship, stationing of lifeboat crews, orders to lifeboat crews, etc., are not carefully laid out, and in many cases these drills are perfunctory.

(j) The condition of the bedding, in many cases, is not satisfactory. This is due largely to the fact that the men have not been supplied with sufficient equipment. Every enlisted man of the Naval Militia should have one hammock turned over to him (one should also be on the ship loaned to the Naval Militia, as a reserve for each man when scrubbing his dirty one), one mattress, two mattress covers, one foot lashing, one hammock lashing, and one set of clews. Bedding should be kept clean at all times and the spare mattress cover should be kept in the hammock. Foot lashing, clews, and hammock lashing should be neatly whipped and hammock neatly lashed and stowed.

(k) Clothes stops should be used when clothes are stowed in bags.

(l) Lack of engineers to run the engines and boilers of Naval Militia ships is apparent, and it is desirable to enlist engineers in the Naval Militia so that it will not be necessary to hire engineers to make cruises.

(m) Carelessness in uniform. More attention should be given to uniforms.

(n) There are too many officers, and, in many cases, the officers are of too high rank.

(o) There are too many chief petty officers and too many petty officers for the number of enlisted men, in many cases, and the respective ratings are not well balanced.

(p) Many organizations fail to keep the division informed of their need for supplies, necessitating the initiative by this division, which is not desirable.

(q) Failure of the Naval Militia to issue proper orders to carry out certain work on cruises, etc., frequently delays the work in hand. Specific orders should be issued to cover the important points of the work to be performed, so that once started this work may proceed with rapidity and thoroughness.

(7) In view of the fact that the Federal Government has appropriated, in all, \$325,000 this year for the Naval Militia, the States should also increase their appropriations, as it can not be expected that the Federal Government can stand all the expenses of the different States for the Naval Militia.

(8) Failure to report the defects on the ships loaned to the Naval Militia in time has frequently delayed the repairs thereto.

(t) Failure to fill vessels loaned to the Naval Militia with coal before leaving on a cruise, necessitating coaling at out-of-the-way places with coal at high prices.

55. The Naval Militia act has made it possible for the Navy Department to build up an organization of great benefit to the Navy Department in time of war. When it is realized that a very large reserve naval personnel will be needed to put the Navy, with its purchased auxiliaries, in a position to enter a great naval war, it is recommended that the department foster in every way the building up of the Naval Militia, especially in view of the fact that by the terms of the Naval Militia act the Naval Militia or any reserve existing must be called on before volunteers. The Naval Militia act imposes new obligations upon the Navy Department and requires that active support be given by all. There are 130 divisions to be supplied with inspector-instructors, and although it may be possible to supply officers of the branch hydrographic offices, recruiting officers, and material inspection officers under the Bureaus of Steam Engineering and Construction and Repair, and officers on duty at navy yards, it will be necessary to detail other officers to certain cities, whether active or retired, in order that the Naval Militia may be properly instructed and inspected at all times. Without proper inspection and instruction by officers of the regular Navy, there will be little progress in many divisions. It is realized that the Mexican situation has necessitated putting many ships in commission, and has resulted in increasing the duties of many officers on shore duty, but the situation should be met.

56. It is believed that with proper advertising many good men, having in mind their civic duties, will enlist in the Naval Militia, and this spirit should be fostered. The Secretary of the Treasury has agreed to allow posters to be put up in public buildings, to encourage enlistments in the Naval Militia, and such advertising will be encouraged.

57. The officers and men of the Naval Militia should have ample notice of the annual cruises on ships of the regular Navy. Men necessarily have to arrange their annual leave, and instances have arisen where men have been unable to make proper arrangements to cruise owing to the lateness of the department in assigning ships. Furthermore, the regular officers of the ship should have ample notice, in order to prepare for and lay out a comprehensive program for the cruise.

58. It is a mistake to use a ship in reserve commission for Naval Militia cruises, as the regular officers and men should be thoroughly familiar with the ship in order that each and every man may serve as an instructor. For that reason a ship in full commission should be assigned, the necessary officers and men being landed to accommodate the Naval Militia comfortably and efficiently.

59. The cruises of the ships of the Regular Navy with the Naval Militia should be made as attractive as possible, but there should not be too much liberty, as the cruises are short, and efficiency should be the first thought.

60. It is believed to be a mistake to put different State organizations on board a ship at the same time. Comfort should be a consideration, and overcrowding should be avoided. It is not possible to instruct a great many officers and men on the same cruise properly.

61. The clerical force of the Office of Naval Militia and the Division of Naval Militia Affairs has been eminently satisfactory in every respect. One and all they have handled the constantly increasing volume of business intelligently and with dispatch; but new fields are constantly opening up, and an increased clerical force is imperative.

62. The Naval Militia act requires that the Secretary of the Navy submit annually to Congress reports as follows, viz:

(a) Section 8, abstracts of returns and reports of adjutants general, or others authorized to perform the duties of adjutants general. These abstracts are made from the following reports of the adjutants general, viz, "Return of Personnel," "Report of Training of the Naval Militia for the year," "Report of Cruises and Inspections."

(b) Section 10, report of expenditures made by the Secretary of the Navy in the execution of the requirements of section 10; that is, the appropriation of \$200,000 for "Arms, Uniforms, Equipment, etc., Naval Militia." This report will be found in the annual report of the Paymaster General to the Secretary of the Navy and will not be found in this report.

(c) Section 17, statement of expenses in connection with section 17, for (1) the actual and necessary traveling expenses and a per diem for the members of the Naval Militia General Board, and (2) for the necessary clerical and office expenses of the Division of Naval Militia Affairs, in the Office of the Secretary of the Navy. These two items are among the allowed expenditures under the appropriation "Arming and equipping the Naval Militia," as provided for in the annual appropriation for the Navy, and as mentioned in section 14 and section 20 of the Naval Militia act. The complete returns of the appropriation "Arming and equipping the Naval Militia" will be found in the annual report of the Paymaster General to the Secretary of the Navy, and will not be found in this report.

F. B. BASSETT, Jr.

ORGANIZATION AND PERSONNEL.

The strength of the organization on June 30, 1914, is as follows:

Statement of strength of Naval Militia organizations on June 30, 1914.

State.	Number of divi- sions.	Officers.					Enlisted men.		
		Commis- sioned.		Warrant.		Total.	Chief petty officers.		
		Line.	Staff.	Line.	Staff.		Deck.	Me- chan- ical.	Spe- cial.
California.....	9	41	14	5	4	64	6	5	5
Connecticut.....	4	15	4	3		22	3	7	1
District of Columbia.....	4	11	2			13	9	5	9
Florida.....	2	12	2	1	1	16	5	4	4
Illinois.....	10	39	6			45	4	9	6
Louisiana.....	5	19	5	1	1	26	6	7	3
Maine.....	3	8	2			10	5	1	
Maryland.....	6	11	3	3	1	18	2	3	3
Massachusetts.....	10	39	6			45	10	8	4
Michigan:									
First.....	4	20	5			25	2	4	1
Second.....	4	15	3			18	2	2	2
Minnesota.....	3	13	3		1	17	4	1	2
Missouri.....	4	16	3			19	2	2	1
New Jersey:									
First.....	4	11	3	1		15	4	3	2
Second.....	5	10	4			14	2	5	2
New York:									
Staff.....		5	3			8			
First.....	8	24	7			31	4	6	4
Second.....	6	17	4			21	4	6	3
Third.....	7	19	5			24	6	3	6
North Carolina.....	6	31	8	2	2	43	5	1	
Ohio:									
First.....	3	5	3			8	2	2	1
Second.....	2	7	3			10	2	1	2
Oregon.....	3	10	3		1	14	4	6	5
Pennsylvania.....	4	11	1			12	2	4	1
Rhode Island.....	4	11	2		1	14	1	2	1
South Carolina.....	3	12	2			14	3	1	
Washington.....	4	14	1	2		17	1	4	3
Wisconsin.....	3	10	3			13			
Total.....	130	456	110	18	12	596	100	102	71

Statement of strength of Naval Militia organizations on June 30, 1914—Contd.

State.	Enlisted men.							Grand total.
	Petty officers.			Men.			Total.	
	Deck.	Mechan- ical.	Special.	Deck.	Mechan- ical.	Special.		
California.....	84	23	29	409	45	128	634	698
Connecticut.....	28	19	8	161	31	.....	258	280
District of Columbia.....	23	24	25	79	34	.....	208	221
Florida.....	3	7	1	22	27	.....	73	89
Illinois.....	71	32	27	302	70	128	519	594
Louisiana.....	34	13	13	208	30	116	330	356
Maine.....	21	.....	6	142	.....	.....	175	185
Maryland.....	19	12	2	55	36	.....	132	150
Massachusetts.....	91	51	22	283	80	154	603	648
Michigan:								
First.....	26	6	8	167	.....	.....	214	239
Second.....	28	8	4	167	.....	.....	213	231
Minnesota.....	17	3	2	145	.....	.....	174	191
Missouri.....	19	6	5	111	38	.....	184	203
New Jersey:								
First.....	13	10	1	113	33	.....	179	194
Second.....	13	6	3	126	26	.....	182	196
New York:								8
Staff.....	45	22	13	380	54	116	544	575
First.....	36	37	13	247	51	115	412	433
Second.....	29	13	4	240	78	16	365	419
Third.....	44	42	.....	215	25	.....	332	375
North Carolina.....								
Ohio:								
First.....	9	14	3	72	26	.....	129	137
Second.....	9	8	6	55	10	17	100	110
Oregon.....	19	18	11	108	30	127	228	242
Pennsylvania.....	26	15	3	129	.....	.....	180	192
Rhode Island.....	16	6	5	149	2	.....	182	196
South Carolina.....	16	2	3	78	.....	.....	103	117
Washington.....	21	19	21	191	29	116	305	322
Wisconsin.....	13	3	4	94	.....	.....	114	127
Total.....	773	418	242	4,448	755	223	7,132	7,728

¹ Bandsmen.² Marine guard.

Officers.....	596
Men.....	7,132
Total.....	7,728

Since the last report the following divisions have been disbanded:
At Ashtabula, Ohio; Escanaba, Mich.; Plymouth, N. C.; Bandon and
Marshfield, Oreg.; and the following divisions have been organized:

At Watertown, N. Y., Sixth Division, Third Battalion.

At Buffalo, N. Y., Seventh Division, Third Battalion.

At Aberdeen, Wash., Fourth Division.

At Pine City, Mich., Third Division.

At Marquette, Minn., Fourth Division, Second Battalion.

Owing to the passage of the Naval Militia bill February 16, 1914, the Indiana Naval Militia had to be mustered out as part of the Naval Militia on account of the extreme youth of the members, who were all students at the Culver Military Academy.

The assignment of vessels to the Naval Militia on June 30, 1914, was as follows:

State.	Vessel.	City.
California.....	Marblehead ¹	San Francisco.
Connecticut.....	None.....	
District of Columbia.....	Sylvia.....	Washington.
Florida.....	Mackenzie.....	Key West.
Illinois.....	Dubuque.....	Chicago.
Louisiana.....	Amphitrite ¹	New Orleans.
	Stranger.....	Do.
Maine.....	None.....	
Maryland.....	Montgomery ¹	Baltimore.
Massachusetts.....	Chicago ¹	Boston.
	Rodgers.....	Do.
	Dupont.....	Fall River.
Michigan.....	Don Juan de Austria.....	Detroit.
	Yantic.....	Hancock.
Minnesota.....	Gopher.....	Duluth.
Missouri.....	Huntress.....	St. Louis.
New Jersey.....	Adams.....	Hoboken.
	Vixen.....	Camden.
New York.....	Granite State ²	New York.
	Wasp.....	Do.
	Gloucester.....	Brooklyn.
	Hawk.....	Buffalo.
North Carolina.....	Sandoval.....	Rochester.
	Elfrida.....	New Bern.
	Foots.....	Do.
Ohio.....	Dorothea.....	Cleveland.
	Essex.....	Toledo.
Oregon.....	Boston ²	Portland.
Pennsylvania.....	Wolverine.....	Erie.
Rhode Island.....	Aileen.....	Providence.
South Carolina.....	None.....	
Washington.....	Concord.....	Seattle.
	Fox.....	Tacoma.
Wisconsin.....	None.....	

¹ In reserve commission.

² Station ship; can not cruise.

The following changes in the assignment of vessels to the Naval Militia have been made since the last report:

The *Sylvia* was withdrawn from the Pennsylvania organization and not replaced.

The *Cheyenne* was withdrawn from the Washington organization and was replaced by the *Vicksburg*.

The *Vicksburg* was withdrawn from the Washington organization and was not replaced.

The *Isla de Luzon* was withdrawn from the Missouri organization and was not replaced.

The *Marietta* was withdrawn from the New Jersey organization and was replaced by the *Adams*.

The *Machias* was withdrawn from the Connecticut organization and was not replaced.

The *Ozark* was withdrawn from the District of Columbia organization and was replaced by the *Sylvia*.

The *Somers* was withdrawn from the Maryland organization and was replaced by the *Montgomery*.

The *Dupont* has been assigned to the Massachusetts organization with station at Boston.

Summary of Naval Militia cruises from January 1, 1913, to July 1, 1914.

Vessel.	State.	Miles cruised.
Adams.....	New Jersey (First Battalion).....	300.0
Allen.....	Rhode Island.....	1,098.8
	District of Columbia.....	990.0
	Indiana.....	1,015.0
	Maine.....	410.0
Alabama.....	Maryland.....	990.0
	New York (all).....	2,724.0
	North Carolina.....	766.0
	Rhode Island.....	410.0
Amphitrite.....	Louisiana.....	25.0
Chicago.....	Massachusetts.....	(1)
Don Juan de Austria.....	Michigan (First Battalion).....	561.3
Dorothea.....	Ohio (First Battalion).....	
Dubuque.....	Illinois.....	2,443.0
Dupont.....	Massachusetts.....	72.0
Essex.....	Ohio (Second Battalion).....	
Elfrida.....	North Carolina.....	709.0
Foote.....	do.....	828.0
Fox.....	Washington.....	580.0
Gloucester.....	New York (Second Battalion).....	4,823.0
Gopher.....	Minnesota.....	
Hawk.....	New York (Third Battalion).....	3,972.5
Huntress.....	Missouri.....	315.0
MacDonough.....	Massachusetts.....	1,360.0
Machias.....	Connecticut.....	2,587.0
Mackenzie.....	Florida.....	640.0
Marblehead.....	California.....	656.0
Marletta.....	New Jersey (First Battalion).....	400.0
Montgomery.....	Maryland.....	778.0
Nahma (launch).....	Louisiana.....	572.0
Ozark.....	District of Columbia.....	450.0
Rodgers.....	Massachusetts.....	516.0
Sandoval.....	New York (Third Battalion).....	1,925.0
Stranger.....	Louisiana.....	85.0
Sylvia.....	Pennsylvania.....	126.0
Do.....	District of Columbia.....	907.0
Vicksburg.....	Washington.....	240.0
Vixen.....	New Jersey (Second Battalion).....	2,561.0
Wasp.....	New York (First Battalion).....	1,460.0
Wolverine.....	Pennsylvania.....	2,671.0
Worden.....	do.....	1,664.0
Yantic.....	Michigan (Second Battalion).....	1,688.0

¹ All but summer cruise on Rodgers and MacDonough.

Participation by States in summer exercises.

State.	Ship.	Number of—		Remarks.
		Officers.	Men.	
California.....	Pacific Reserve Torpedo Flotilla. ¹	9	54	
	Pacific Torpedo Flotilla. ¹	5	40	
Connecticut.....	Machias.....	17	159	} 2 cruises.
		12	137	
District of Columbia.....	Alabama ¹	11	104	
Florida.....	None.....			Made several short cruises on the MacKenzie.
Illinois.....	Dubuque ¹	47	425	4 cruises; 11 hired men.
Indiana.....	Alabama ¹	3	47	
Louisiana.....	Amphitrite.....	14	105	22 hired men.
Maine.....	Alabama ¹	6	90	
Maryland.....	Alabama ¹	6	54	
Massachusetts.....	Chicago.....	28	492	
	MacDonough ¹	5	39	
Michigan.....	Rodgers.....			No report received on this cruise.
	Don Juan de Austria ¹	15	136	33 hired men.
	Yantic ²	18	199	28 hired men.
Minnesota.....	Gopher ²			Perry Centennial exercises.
Missouri.....	None.....			
New Jersey.....	Marietta.....	13	102	
	Vixen.....	25	174	2 cruises.
New York.....	Alabama, first cruise ¹	31	427	
	Alabama, second cruise ¹	36	465	
	Hawk ²	7	44	
	Sandoval ²			
North Carolina.....	Alabama ¹	17	108	
Ohio.....	Essex ²	9	120	
	Dorothea ²	11	90	3 hired men.
Oregon.....	St. Louis ¹	13	99	
Pennsylvania.....	Worden ¹	6	82	
	Wolverine ²	4	46	4 hired men.
Rhode Island.....	Alabama ¹	14	124	
South Carolina.....	None.....			Has no vessel.
Washington.....	Galveston ¹	8	180	
	Vicksburg.....	6	41	
Wisconsin.....	None.....			Has no vessel.

¹ Vessel of regular service; assigned to take Naval Militia on cruise.² All ships on the Great Lakes participated in the Perry Centennial and did a considerable amount of cruising, of which no special report was made.

TARGET PRACTICE SCORES.

Summary of target practice 1913 held by Naval Militia.

FOUR-INCH.

Vessel.	State.	Total shots.	Actual hits.	Actual percentage of hits.	Final average.	
					Shots per gun per minute.	Hits per gun per minute.
Marblehead.....	California.....	56	29	52	4.185	2.21
Machias.....	Connecticut.....	42	24	57.1	3.73	2.16
Dubuque.....	Illinois.....	84	18	21	2.91	.85
Chicago.....	Massachusetts.....	112	44	39	7.90	3.08
Marietta.....	New Jersey, first.....	56	3	5.4	4.29	.19

THREE-INCH.

Alabama.....	District of Columbia..	14	6	42.9	3.07	1.28
Do.....	Indiana.....	14	4	19	5.73	1.08
Do.....	Maine.....	28	20	71.5	8.79	6.31
Do.....	Maryland.....	28	14	50	6.35	2.88
Do.....	North Carolina.....	14	9	64.3	10.23	6.67
Worden.....	Pennsylvania.....	28	1	3.6	4.3	.16
Alabama.....	Rhode Island.....	28	6	21.4	9.78	1.98

SIX-POUNDER.

Dubuque.....	Illinois.....	71	22	31	5.57	1.40
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THREE-POUNDERS.

Machias.....	Connecticut.....	40	7	17.5	4.16	0.60
Wasp.....	New York, first.....	133	61	45.9	8.67	3.89
Gloucester.....	New York, second.....	140	65	46.43	11.76	5.24
Dorothea.....	Ohio, second.....	53	30	56.6	3.98	2.50

ONE-POUNDERS.

Dubuque.....	Illinois.....	37	2	5.4	6.06	0.21
Dorothea.....	Ohio, second.....	66	18	27.2	3.52	1.09

REPORT OF NAVAL RADIO SERVICE.

NAVY DEPARTMENT,
NAVAL RADIO SERVICE,
Radio, Va., March 18, 1914.

To: Chief of Bureau of Navigation, Navy Department, Washington,
D. C.

Subject: Report on Radio Service for the year ending December 31,
1913.

I have the honor to present herewith a report on the United States Naval Radio Service for the year ending December 31, 1913, which includes the operations of the Radio Service from December 13, 1912, the date the act of Congress approved August 13, 1912, became effective, up to the end of the calendar year 1913. The next annual report will contain the operations of the Radio Service from the beginning of the calendar year 1914 to the end of the fiscal year 1915.

On August 13, 1912, Congress passed an act entitled "An act to regulate radio communication," which became effective December 13, 1912. Reference to article 18 of this act will show that provision is made for the opening of certain Government shore stations to commercial business under the terms of the Berlin convention of 1906, or future international conventions to which the United States may be a party.

By Navy Department General Order No. 240, of November 9, 1912, the office of the Superintendent of Naval Radio Service was established, with headquarters at the radio station, Arlington, Va. This office, among other things, is charged with—

(1) The preparation of regulations and issue of detailed instructions for the operation of stations in accordance with military efficiency, international agreements in force, and the laws affecting the operation of naval radio stations.

(2) The control of the commercial work handled by naval radio stations, including issue of accounting and operating forms, auditing commercial accounts, traffic agreements, and accounting with commercial and other Government managements involved.

The superintendent was authorized to correspond directly within the naval service, in accordance with the procedure laid down by the regulations in the case of bureaus and other offices under the Navy Department, in regard to all matters in which he is authorized to take action, and directly with private and commercial concerns upon matters of reciprocal interest relating to the commercial operation of naval radio stations in questions of interference, traffic arrangements, proposed changes of rates, and accounting.

In the following list are shown the names of the shore stations now operated under the jurisdiction of the Navy Department:

Portland, Me.
 Portsmouth, N. H.
 Boston, Mass.
 Cape Cod, Mass.
 Nantucket Shoals Lightship.
 Newport, R. I.
 Fire Island, N. Y.
 New York, N. Y.
 Philadelphia, Pa.
 Annapolis, Md.
 Washington, D. C.
 Arlington, Va.
 Norfolk, Va.
 Diamond Shoals Lightship.
 Beaufort, N. C.
 Frying Pan Shoals Lightship.
 Charleston, S. C.
 St. Augustine, Fla.
 Jupiter, Fla.
 Key West, Fla.
 Pensacola, Fla.
 New Orleans, La.
 San Juan, P. R.
 Guantanamo Bay, Cuba
 Colon, Panama.

Porto Bello, Panama.
 Balboa, I. C. Z.
 San Diego, Cal.
 Point Arguello, Cal.
 Farallons, Cal.
 Yerba Buena, Cal.
 Mare Island, Cal.
 Eureka, Cal.
 Cape Blanco, Oreg.
 North Head, Wash.
 Tatoosh, Wash.
 Bremerton, Wash.
 Honolulu, Hawaii.
 Guam.
 Cavite, P. I.
 Olongapo, P. I.
 Peking, China.
 St. Paul, Pribilof Islands, Alaska.
 St. George, Pribilof Islands, Alaska.
 Unalga, Alaska.
 Dutch Harbor, Alaska.
 Kodiak, Alaska.
 Cordova, Alaska.
 Sitka, Alaska.

The high-power station at Darien, Isthmian Canal Zone, is under construction and should be in operation the present year. A site has been obtained for the high-power station in the vicinity of San Diego, Cal., and active construction will soon be commenced. A site for a new station at Isabel, at the mouth of the Rio Grande, Tex., has been determined upon, will be acquired, and the erection of a station at that place will be hurried. A station in that neighborhood has been long felt to be a necessity, and recent developments in Mexico have justified the active work that has been done toward its erection. A radio station at the training station, Great Lakes, has been authorized, and will be proceeded with as soon as funds allow. A small set was reestablished at the Yerba Buena Training Station for purposes of instruction of enlisted men, to be used for official business only under the direct supervision of the commandant.

Two hundred ships of the Navy are fitted with radio installations and these include practically every ship that ever makes a trip to sea.

The work of this office naturally divides itself into two general divisions, viz, that falling under the head of official or Government work, and relating principally to the military features of radio service, and that falling under the head of commercial work. In addition to the purely naval duties of the coast stations, all are actively engaged in transmitting messages to and from all departments of the Government that may have occasion to transact official business between ship and shore, and shore and ship, such as the Revenue-Cutter Service, Army transport service, Lighthouse Service, Weather Bureau, etc.

One of the first duties connected with the establishment of this office was the adoption of standard practices in the matter of operating. The Government had become a signatory party to the Berlin

Radiotelegraphic Convention on May 25, 1912, and this prescribed the exact method to be followed in the handling of all commercial radiograms. Though not obligatory to make the practice of operation required for commercial radiograms apply to official work in its entirety, the advantages to be gained by so doing were very obvious, particularly as under the radio act of 1912 certain naval stations were required to do commercial work, and all operators, both afloat and ashore, were required to comply with these standard international practices. The opening of certain naval stations to commercial work necessitated the preparation of instructions and regulations necessary to efficiently carry on this work. The instructions were issued to the service as occasion demanded in the form of circulars and bulletins. Later these were embodied in a Handbook of Regulations, United States Naval Radio Service, which was issued to the service the latter part of December, 1913. The preparation of this book was the result of a year's work and experience, and involved much correspondence with ships and companies operating land telegraph lines and cables. Too much credit can not be given to the officers who were engaged in this work, and who faithfully labored with subjects that were comparatively new to them. The first part of the work was under the direct charge and supervision of Lieut. Commander D. W. Todd, who was the assistant superintendent, and was followed in turn by Lieut. Commander H. G. Sparrow and Lieut. Commander S. W. Bryant, all of whom furnished valuable suggestions. Paymaster E. C. Gudger, the accounting officer of the service, undertook the preparation of data referring to rates and all traffic accounting, and the result reflects great credit on his zeal and energy. The handbook is divided into two sections, the first of which deals with all matters of operation that are necessary for the naval service in the conduct of Government business, the second section entirely with matters concerned with the commercial working of the system.

Besides the standard practices of operation which are common to the handling of both official and commercial work, certain methods of operation in the fleets are used, which it is not considered desirable to speak of in a public report. The standard of operation in the Atlantic Fleet is very high, and this state of efficiency is due to the interest taken by the commander in chief and chief of staff, and to the personal interest of the fleet radio officer, Lieut. S. C. Hooper, who has assiduously labored to bring about this high state of efficiency. This has been furthered by the technical department under the Bureau of Steam Engineering, in introducing new and modern apparatus which allows a control of operation not possible before its installation.

The results attained in the Atlantic Fleet justify the recommendation that a fleet radio officer should be attached to the staff of each commander in chief, and that such an officer should be a radio operator. Many young officers are now qualified as operators, due to the excellent training they receive in the fleets, and the services of these officers will be invaluable in time of war. This office keeps a list of the officers who have been reported as qualified, which should be considered as additional to any information shown on the "Report of fitness" of these officers.

The provisions for the training of men for operators seem ample and complete, and there seems to be no immediate reason why the naval service should not always have its full complement of operators. The coordination between the bridge signal force and radio operators on board ship is very complete, and many fine young radio operators receive their first training in bridge signaling. The knowledge required of operators in the naval service is greater in several respects than required of operators in commercial life, and many take the examination required by the Department of Commerce prior to the issue of a commercial license by that department. Most of the applicants for licenses for commercial operators issued by the Department of Commerce are examined in the various naval stations, and the examinations are conducted by naval officials, who prepare and mark all papers.

When battleships are ordered to navy yards for their overhaul periods, it has been the practice to send their chief electricians to the station at Arlington for a special course of training, and in addition to this they receive instructions at the Bureau of Standards, under the experts of the Bureau of Steam Engineering, in the elements necessary to a proper understanding of the adjustment of their apparatus. This has resulted in great benefit, and chief electricians who have received this instruction have been able to so adjust their apparatus as to obtain far better results, and have expressed their surprise that these possibilities were under their hand without their having knowledge of it. It is hoped that this practice will continue and be enlarged, so that as many as possible of these leading men may have the advantage of this training.

**FIVE CHIEFS ONLY PER YEAR TO GO UP FOR WARRANT GUNNERS—
AGE LIMIT TO BE WAIVED.**

The recent action of the department in allowing certain chief electricians (radio) to take the examination for promotion to warrant rank has opened the way to the promotion of a very deserving class of the enlisted personnel. Until quite recently the highest rank that could be obtained by the enlisted personnel of the radio branch was that of chief electrician (radio), while practically every other class of men had the hope of obtaining a warrant rank. It is recommended that this action on the part of the department be continued, but that the number to be so promoted each year be kept to the maximum of five. This will result in promoting only the very best men, and the hope of promotion will tend to retain in the service many men who might otherwise seek employment in commercial operating companies. In many cases those who are most deserving of this promotion, owing to their valuable services in shore stations, at laboratories, or in the Bureau of Steam Engineering, do not meet the requirements of the department as to sea service, and owing to the recent application of promotion in this branch many chief electricians are too old to meet the requirements. It is recommended that the bureau, in granting permission to take the examination for promotion to gunners from chief electricians (radio), consider the special circumstances in each case, in order that very deserving men may not be denied this promotion, due to no fault of their own.

DETAILS TO BE MADE FOR ALL OPERATORS BY SUPERINTENDENT OF RADIO SERVICE, NOT BY ENLISTED MEN'S DETAIL OFFICE.

It is not to be denied that a commander in chief, through his radio officer, is the best one to judge of the efficiency of fleet radio operators, and to him should be left the detailing of operators within his fleet, so that the maximum efficiency may be obtained. He also is in a position to judge of the operating efficiency of shore station operators along the coasts, and recommendations from him as to details should be favorably considered. It is believed that the general detailing of operators should be done from this office, and a recommendation to this effect will be made the subject of a special letter.

COMMISSIONED OR WARRANT OFFICER NEEDED IN CHARGE AT KEY WEST, GUANTANAMO, SAN DIEGO, AND HONOLULU.

All shore radio stations are under the direct control of a commandant of a navy yard, or of some particular person detailed by the Bureau of Navigation. Where such stations are located in a naval station or near by, this control suffices, as the officer concerned can usually detail some one to be in active charge. At some stations, however, which are remote from naval stations, and at others where the commissioned or warrant personnel is limited, the active control of the station falls to the chief electrician in charge, who, in addition to his duties as such, has to deal with larger questions of administration and discipline, and it is not believed that it is proper that this should be so. The official and commercial business handled by the stations at Key West, Guantanamo Bay, San Juan, in the Canal Zone, San Diego, and, in the future, Honolulu, is such that it requires the undivided time of the chief electrician to take care of his particular duties relating to operation alone, and he can not spare the time required for administrative matters. It is recommended that a commissioned or warrant officer be detailed in charge of each of the stations mentioned above as station radio officer and that this policy be recognized as a necessity. The bureau has recently detailed a warrant officer in charge of the San Juan station, and an officer is in the Canal Zone as radio officer of Canal Zone. It is hoped that the recognition of the importance of the work will be enlarged to include the other stations mentioned.

CIVILIAN CLERKS FOR KEY WEST, SAN JUAN, GUANTANAMO, CANAL ZONE, SAN DIEGO, AND HONOLULU.

Most of the shore stations include in their complement a yeoman to do the clerical work of the station. This work already is very heavy and is increasing. For purposes of permanency, and in order that at least one person will be in a position to carry on the policy of the service and be acquainted with all local conditions, it is recommended that a civilian clerk be appointed to serve at Key West, San Juan, Guantanamo Bay, the Canal Zone, San Diego, and, in the future, at Honolulu, relieving the yeomen at those places.

OFFICE FORCE, SUPERINTENDENT'S OFFICE.

There are at present attached to the office of the superintendent three stenographers and typewriters; one was detailed on October 28, 1912, at a per diem pay of \$3.76; one on November 11, 1912, at a per

diem pay of \$3.28; and the third on February 10, 1913, at a per diem pay of \$3.28. The first two had been previously in the classified service and were transferred from other posts; the last was an original appointment. At a suitable time the question of increase of pay for these clerks will be brought to the attention of the department in an official letter. Also attached to the office are three chief yeomen and one yeoman, second class. Of these, two chief yeomen and the second-class yeoman are employed in the auditing and accounting department under the active direction of the pay officer of the station, and one chief yeoman is the bookkeeper.

**CIVILIAN EXPERT FOR COMMERCIAL WORK, ACCOUNTING, ETC., IN
ADDITION TO CHIEF PAY YEOMAN.**

Lack of trained experts is particularly felt in the administration of the commercial work, which, by act of Congress, falls to certain naval radio stations. At the time of the inauguration of the service no person now attached to this office had any experience whatsoever in this particular work. It is now believed that matters are running smoothly and will continue to improve, but every change of an officer means that the peculiar duties have to be learned from personal experience. Each branch has its own specialties, not the least of which is the accounting department under the active direction of a pay officer. This accounting involves Government and "other line" money, and requires special form of bookkeeping different from any other used in the Navy. The actual bookkeeper, as stated above, is a chief yeoman in the Navy, who, of necessity, is subject to the same laws of change as the pay officer, and there is no permanence. The employment of a civilian expert trained in the administrative and executive control of the fast-growing commercial business seems to be justified, and therefore I have to make the recommendation that such a civilian expert in all that relates to the handling of commercial business as applied to radio work, be authorized for this office.

The number of official messages handled by the stations belonging to the naval coast system for the months of October, November, and December, 1913, is shown in Table A. Previous to this period the prescribed form did not give complete enough data for reporting messages. For the period given the list is incomplete, due to poor mail facilities from some far-off stations, but the table gives a fair idea of the amount of work done by these stations. In future reports it will be possible to give accurately the number of messages handled by each station for each month in the year.

The coast stations that under the law are opened for the transaction of commercial business are given in the following list, and opposite each name is given the date on which the regulations for handling commercial business went into effect:

Key West, Fla., December 16, 1912.
St. Paul, Pribilof Islands, Alaska, January 14, 1913.
St. George, Pribilof Islands, Alaska, January 14, 1913.
Unalga, Alaska, January 14, 1913.
Dutch Harbor, Alaska, January 14, 1913.
Kodiak, Alaska, January 14, 1913.
Cordova, Alaska, January 14, 1913.
Sitka, Alaska, January 14, 1913.
Charleston, S. C., January 31, 1913.
St. Augustine, Fla., January 31, 1913.
Jupiter, Fla., January 31, 1913.

San Juan, P. R., January 31, 1913.
 Colon, Republic of Panama, January 31, 1913.
 Guantanamo Bay, Cuba, February 9, 1913.
 Pensacola, Fla., February 28, 1913.
 Guam, February 28, 1913.
 North Head, Wash., March 14, 1913.
 Tatoosh, Wash., March 14, 1913.
 Cape Blanco, Oreg., March 14, 1913.
 Eureka, Cal., March 14, 1913.
 Point Arguello, Cal., March 14, 1913.
 San Diego, Cal., March 14, 1913.
 Balboa, Isthmian Canal Zone, May 31, 1913.

The number of commercial messages with the number of words handled by each station is shown in Table B.

The amount of money collected for the transmission of messages through naval coast stations opened to commercial business is given in Table C.

By Navy Department General Order No. 10, of February 7, 1913, the radio installations on board all vessels of the Navy were opened to commercial business for the benefit of officers and crews, under certain regulations prescribed by the commanders in chief of the fleets or senior officers present.

In addition to the privileges enjoyed by officers and crews of the ships of our Navy, this service has been of great value to the public. It has frequently happened that communication by the land lines in Mexico during the past year has been interrupted, and the only means of communication with coast ports has been by the radio installations of the ships anchored in the ports. The ship stations have been freely used by the public in sending messages to and from points in the United States, from and to points in Mexico, by relay to naval radio stations where connection with land lines was possible.

The number of commercial messages, with the number of words handled by each ship, is shown in Table D.

The amount of money collected for transmission of messages through ships of the Navy is shown in Table E.

All money collected as the result of the transmission of radiograms is turned into the Treasury as miscellaneous receipts.

Recapitulating the information given in the accompanying tables:

TABLE A.

Total number of official radiograms through all shore stations for the months October-December, 1913.....	60, 196
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TABLE B.

Total number of commercial messages handled by all stations open to public business, average period of 10 months, 23 stations.....	12, 854
Total number of words.....	218, 403

TABLE C.

Total amount of shore station charges collected on commercial messages through shore stations from December, 1912, to December 31, 1913.....	\$17, 535. 11
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TABLE D.

Total number of commercial messages handled by ships of the Navy.....	4, 856
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TABLE E.

Total amount of ship charges collected on commercial messages through ship stations.....	\$3, 325. 41
Total amount of money collected for shore and ship stations charges	\$20, 860. 52

Ships always have receiving charges on commercial radiograms, and sending charges only when the sender does not belong to the naval service.

This office is not in possession of any data which shows the number of official radiograms in which ship stations are alone concerned.

An attempt was made to show the decrease in the cost to the department by the use of its radio service, and, in consequence, the decreased use of ordinary land lines for the transmission of official business, but inquiry developed the information that telegraph and telephone bills are audited as one account, and, consequently, the cost of the land telegraph could not be found. If the accounting office of the Bureau of Supplies and Accounts could separate these items in their accounting, the use of the radio service would show undoubted decrease in the charges for telegraphic transmission from year to year.

As an indication of the saving effected the department by its radio service, the station at Arlington, for the month of February, 1914, transmitted 536 official messages from officials of the department, on which the land and cable charges, computed at Government rates, amounted to \$302.52; or, in other words, this amount would have been chargeable to the department had its radio system not been used. Considering that this is but one of our 50 shore stations, and for one month, it is readily conceivable that the saving by the whole service for a year is very great. It is recommended that in all cases, except possibly very urgent messages which require an immediate answer, messages intended for naval shore stations be forwarded by radio.

It is not believed that officials of the Navy Department make as much use of its radio service as they could do, and it is recommended that its advantages be brought to the attention of all bureaus, offices, divisions, and subdivisions, and its use for ordinary messages be made compulsory.

Grouping the separate recommendations of this report on which action is requested:

- (a) Fleet radio officer for each fleet.
- (b) Chief electricians to be detailed to Arlington from ships during overhaul period.
- (c) Promotion to warrant rank from chief electricians to be limited to a maximum of five per year.
- (d) Waiving of certain requirements for certain special men to allow promotion to warrant rank.
- (e) Commissioned or warrant officer to be detailed in active charge of each high powered station, and others to be named.
- (f) Civilian clerks for service at Key West, San Juan, Guantanamo Bay, Canal Zone, San Diego, and later at other places.
- (g) Employment of expert civilian trained in the operation of commercial business.
- (h) Detailing of operators from office of superintendent (subject of a special letter).
- (i) The compulsory use of the radio service in all ordinary messages.

W. H. G. BULLARD.

TABLE A.—Report of number of official messages sent and received at the United States coast radio stations.

OCTOBER, 1913.

Station.	Class of messages.							Grand total.
	A.	B.	C.	E.	S. V. C.	Miscellaneous.	Total.	
Annapolis:								
Sent.....	15	25	.....	1	6	.....	47	157
Received.....	42	28	30	.....	10	.....	110	
Arlington:								
Sent.....	465	.....	145	.....	28	.....	638	1,123
Received.....	322	18	117	.....	28	.....	485	
Balboa:								
Sent.....	.....	.....	.....	.....	12	.....	12	18
Received.....	.....	.....	.....	.....	6	.....	6	
Beaufort:								
Sent.....	247	9	518	1	28	.....	803	1,744
Received.....	262	12	544	90	33	.....	941	
Boston:								
Sent.....	112	36	87	.....	15	.....	250	513
Received.....	168	30	45	.....	20	.....	263	
Cape Blanco:								
Sent.....	7	2	8	.....	2	.....	19	30
Received.....	7	.....	4	.....	.....	.....	11	
Cape Cod:								
Sent.....	36	35	100	.....	18	.....	189	340
Received.....	28	29	84	.....	10	.....	151	
Charleston:								
Sent.....	51	4	96	.....	32	.....	183	642
Received.....	146	15	271	.....	27	.....	459	
Cordova:								
Sent.....	29	61	21	4	.....	.....	115	230
Received.....	28	61	17	9	.....	.....	115	
Diamond Shoal:								
Sent.....	4	.....	5	.....	5	94	108	132
Received.....	5	.....	8	.....	7	4	24	
Farallon:								
Sent.....	40	11	9	.....	4	2	66	126
Received.....	41	7	5	.....	4	2	59	
Fire Island:								
Sent.....	195	3	55	1	38	.....	292	581
Received.....	193	3	59	1	33	.....	289	
Guantanamo:								
Sent.....	65	3	16	.....	8	.....	92	569
Received.....	146	5	310	.....	16	.....	477	
Honolulu:								
Sent.....	9	7	.....	.....	.....	.....	16	48
Received.....	21	11	.....	.....	.....	.....	32	
Jupiter:								
Sent.....	24	.....	12	.....	3	.....	39	106
Received.....	12	1	50	.....	3	.....	66	
Key West:								
Sent.....	257	6	397	4	55	.....	719	1,497
Received.....	218	8	518	2	32	.....	778	
Mare Island:								
Sent.....	407	37	.....	.....	.....	.....	444	869
Received.....	405	10	.....	.....	.....	.....	415	
New Orleans:								
Sent.....	.....	.....	32	.....	4	.....	36	234
Received.....	27	.....	167	.....	4	.....	198	
Newport:								
Sent.....	367	23	214	15	22	.....	641	1,367
Received.....	437	26	218	18	27	.....	726	
New York:								
Sent.....	285	10	86	.....	48	.....	430	1,016
Received.....	339	20	185	.....	42	.....	586	
Norfolk:								
Sent.....	1,445	11	125	1	.....	.....	1,582	3,836
Received.....	1,542	28	174	10	.....	.....	1,754	
North Head:								
Sent.....	192	36	166	5	4	.....	403	748
Received.....	176	28	131	4	6	.....	345	
Pensacola:								
Sent.....	34	2	185	.....	2	.....	223	530
Received.....	35	2	237	.....	3	.....	307	
Philadelphia:								
Sent.....	107	.....	27	.....	33	438	605	1,717
Received.....	400	11	204	.....	59	438	1,112	
Point Arguello:								
Sent.....	46	.....	68	.....	3	1	118	175
Received.....	41	1	11	.....	3	1	57	

TABLE A.—*Report of number of official messages sent and received at the United States coast radio stations—Continued.*

OCTOBER, 1913—Continued.

Station.	Class of messages.							Grand total.
	A.	B.	C.	E.	S. V. C.	Miscellaneous.	Total.	
Portland:								
Sent.....	1	15	34	.....	5	.....	55	85
Received.....	7	17	2	.....	4	.....	30	
Porto Bello:								
Sent.....	9	271	62	1	4	.....	347	484
Received.....	11	122	16	1	3	.....	137	
Portsmouth:								
Sent.....	9	94	77	.....	17	.....	197	369
Received.....	19	89	50	.....	14	.....	172	
Puget Sound:								
Sent.....	64	24	2	1	7	.....	98	245
Received.....	93	32	16	1	5	.....	147	
San Diego:								
Sent.....	420	46	4	.....	98	.....	563	1,063
Received.....	420	40	4	.....	56	.....	520	
St. Augustine:								
Sent.....	80	.....	62	.....	8	.....	150	251
Received.....	36	1	54	.....	10	.....	101	
Tatoosh:								
Sent.....	23	114	34	.....	1	.....	172	236
Received.....	16	36	11	.....	1	.....	64	
O. F. M. messages:								
Sent.....	.....	.....	.....	.....	.....	.....	.....	9,652
Received.....	.....	.....	.....	.....	.....	.....	.....	10,937
Total.....	.....	.....	.....	.....	.....	.....	.....	20,589

NOVEMBER, 1913.

Annapolis:								
Sent.....	3	8	1	.....	.....	.....	12	75
Received.....	29	8	26	.....	.....	.....	63	
Arlington:								
Sent.....	378	5	57	.....	43	224	707	1,373
Received.....	351	45	3	.....	43	224	666	
Balboa:								
Sent.....	.....	1	.....	.....	7	.....	8	13
Received.....	.....	.....	.....	.....	5	.....	5	
Beaufort:								
Sent.....	145	1	215	33	31	.....	425	1,081
Received.....	212	1	243	125	22	3	606	
Boston:								
Sent.....	64	13	82	.....	6	.....	165	362
Received.....	111	35	44	.....	7	.....	197	
Cape Blanco:								
Sent.....	8	.....	28	.....	.....	.....	36	41
Received.....	3	.....	2	.....	.....	.....	5	
Cape Cod:								
Sent.....	34	8	122	.....	8	.....	167	271
Received.....	27	5	68	.....	4	.....	104	
Cavite:								
Sent.....	207	63	.....	.....	32	.....	302	586
Received.....	220	55	.....	.....	9	.....	284	
Charleston:								
Sent.....	77	3	46	.....	18	.....	144	472
Received.....	195	4	112	.....	17	.....	328	
Colon:								
Sent.....	19	93	145	36	11	.....	304	733
Received.....	35	180	147	56	11	.....	429	
Cordova:								
Sent.....	23	82	14	3	.....	.....	122	227
Received.....	22	76	3	4	.....	.....	105	
Diamond Shoals:								
Sent.....	.....	.....	88	.....	2	.....	90	97
Received.....	1	.....	1	.....	5	.....	7	
Eureka:								
Sent.....	116	1	126	.....	9	.....	252	502
Received.....	113	1	126	.....	10	.....	260	
Farallon:								
Sent.....	52	4	16	1	2	1	76	132
Received.....	51	1	.....	1	2	1	56	

TABLE A.—Report of number of official messages sent and received at the United States coast radio stations—Continued.

NOVEMBER, 1913—Continued.

Station.	Class of messages.							Grand total.
	A.	B.	C.	E.	S. V. C.	Miscellaneous.	Total.	
Fire Island:								
Sent.....	14	1	11		1		27	65
Received.....	18	1	18		1		38	
Frying Pan Shoal:								
Sent.....			35		1		36	40
Received.....	2				2		4	
Guantanamo:								
Sent.....	66	1	6		6		79	586
Received.....	159	6	330		12		507	
Honolulu:								
Sent.....		6					6	15
Received.....	1	8					9	
Jupiter:								
Sent.....	37	2	40				79	99
Received.....	14	4	2				20	
Key West:								
Sent.....	404	6	291	3	34		738	1,142
Received.....	359	8	315	2	20		704	
Mare Island:								
Sent.....	230		10		2		242	532
Received.....	274	3	10		3		290	
Nantucket Shoal:								
Sent.....	5	5	94	11	2		117	176
Received.....	5	4	36	12	1		58	
New Orleans:								
Sent.....			28				30	191
Received.....	25		133			2	161	
Newport:								
Sent.....	141	24	167	7	9		348	744
Received.....	168	27	185	15	6		396	
New York:								
Sent.....	178	19	54		5		256	727
Received.....	312	25	126		8		471	
Norfolk:								
Sent.....	290	8	72		31		401	851
Received.....	279	14	117	4	36		450	
North Head:								
Sent.....	176	33	276	1	10		496	865
Received.....	163	42	154	1	9		369	
Olongapo:								
Sent.....	191	56		29			276	617
Received.....	238	57		46			341	
Pensacola:								
Sent.....	78		138				216	454
Received.....	62		176				238	
Philadelphia:								
Sent.....	61	4	43		21	103	232	589
Received.....	173	8	56		17	103	357	
Point Arguello:								
Sent.....	58	1	77	1	5	6	148	239
Received.....	50		37		3	1	91	
Portland:								
Sent.....	5	10	41		3		59	89
Received.....	2	14	10		4		30	
Porto Bello:								
Sent.....	2	196	60	9	2		269	370
Received.....	6	82		10	3		101	
Portsmouth:								
Sent.....	13	36	66		1		116	233
Received.....	19	28	66		4		117	
Puget Sound:								
Sent.....	52	28	1	2	16		99	238
Received.....	64	25	38	3	19		139	
San Diego:								
Sent.....	492				101		593	1,202
Received.....	520				39		609	
San Juan:								
Sent.....	19	2			9		30	96
Received.....	33	1	30		2		66	
St. Augustine:								
Sent.....	68		38		8		114	182
Received.....	38	2	24		4		68	
Sitka:								
Sent.....	13	1	31		2		58	87
Received.....	12	3	1		2	11	29	

TABLE A.—*Report of number of official messages sent and received by the United States coast radio stations—Continued.*

NOVEMBER, 1913—Continued.

Station.	Class of messages.							Grand total.
	A.	B.	C.	E.	S. V. C.	Miscellaneous.	Total.	
Tatoosh:								
Sent.....	12	108	125	.....	2	.....	247	321
Received.....	9	33	31	.....	1	.....	74	
Unalga:								
Sent.....	25	42	30	7	18	.....	122	239
Received.....	24	42	30	6	15	.....	117	
O. F. M. messages:								
Sent.....	.....	.....	.....	.....	.....	.....	.....	8,244
Received.....	.....	.....	.....	.....	.....	.....	.....	8,959
Total.....	.....	.....	.....	.....	.....	.....	.....	17,203

DECEMBER, 1913.

Annapolis:								
Sent.....	24	61	1	1	10	.....	97	357
Received.....	102	64	35	.....	9	.....	260	
Arlington:								
Sent.....	581	11	59	.....	50	408	1,109	2,431
Received.....	662	178	3	3	68	408	1,322	
Balboa:								
Sent.....	5	.....	.....	.....	.....	.....	5	10
Received.....	5	.....	.....	.....	.....	.....	5	
Beaufort:								
Sent.....	255	34	109	94	43	.....	535	1,056
Received.....	219	73	92	89	48	.....	521	
Boston:								
Sent.....	108	36	56	1	11	.....	212	530
Received.....	169	108	28	1	12	.....	318	
Cape Blanco:								
Sent.....	17	.....	1	.....	.....	.....	18	30
Received.....	11	.....	1	.....	.....	.....	12	
Cape Cod:								
Sent.....	35	8	79	.....	9	.....	131	249
Received.....	21	7	80	.....	10	.....	118	
Cavite:								
Sent.....	135	63	.....	9	42	.....	249	491
Received.....	169	62	.....	2	9	.....	242	
Charleston:								
Sent.....	193	13	36	.....	37	.....	279	738
Received.....	343	30	62	.....	19	.....	459	
Colon:								
Sent.....	61	101	107	42	2	.....	313	730
Received.....	75	196	107	35	4	.....	417	
Cordova:								
Sent.....	16	445	39	26	.....	.....	526	1,063
Received.....	20	407	63	37	.....	.....	527	
Diamond Shoals:								
Sent.....	6	1	1	.....	5	.....	13	152
Received.....	8	1	49	78	3	.....	139	
Eureka:								
Sent.....	148	.....	78	.....	10	.....	236	454
Received.....	129	.....	78	.....	11	.....	218	
Farallon:								
Sent.....	32	2	14	.....	1	.....	48	88
Received.....	31	4	4	.....	1	.....	40	
Fire Island:								
Sent.....	30	27	5	.....	3	.....	65	173
Received.....	55	28	23	.....	2	.....	108	
Guantanamo:								
Sent.....	138	1	6	.....	4	.....	149	537
Received.....	324	1	33	.....	23	.....	388	
Honolulu:								
Sent.....	1	8	.....	.....	.....	.....	9	26
Received.....	2	15	.....	.....	.....	.....	17	
Jupiter:								
Sent.....	67	.....	12	.....	.....	.....	79	108
Received.....	29	.....	.....	.....	.....	.....	29	
Key West:								
Sent.....	567	9	145	12	74	.....	807	1,592
Received.....	538	19	157	6	65	.....	785	

TABLE A.—Report of number of official messages sent and received at the United States coast radio stations—Continued.

DECEMBER, 1913—Continued.

Station.	Class of messages.							Grand total.
	A.	B.	C.	E.	S. V. C.	Miscellaneous.	Total.	
Kodiak:								
Sent.....	8	9	1	.....	4	1	23	46
Received.....	6	12	1	.....	3	1	23	
Mare Island:								
Sent.....	260	3	.....	.....	5	.....	268	610
Received.....	328	10	.....	.....	4	.....	342	
Nantucket Shoals:								
Sent.....	10	5	140	20	1	.....	175	231
Received.....	6	3	33	12	2	.....	56	
New Orleans:								
Sent.....	6	1	29	.....	6	10	52	214
Received.....	32	4	115	.....	3	8	162	
Newport:								
Sent.....	214	70	157	8	11	.....	460	982
Received.....	218	72	154	19	9	.....	472	
New York:								
Sent.....	327	44	41	.....	24	.....	436	1,083
Received.....	464	54	98	.....	31	.....	647	
Norfolk:								
Sent.....	616	40	39	1	60	.....	756	1,607
Received.....	664	59	52	3	73	.....	851	
North Head:								
Sent.....	147	20	249	1	4	.....	421	806
Received.....	162	20	200	1	4	.....	387	
Olongapo:								
Sent.....	177	97	2	49	.....	.....	325	720
Received.....	249	103	1	42	.....	.....	395	
Pensacola:								
Sent.....	196	.....	133	.....	25	.....	354	684
Received.....	180	.....	136	.....	14	.....	330	
Philadelphia:								
Sent.....	133	1	46	.....	14	96	290	682
Received.....	239	6	36	.....	15	96	392	
Point Arguello:								
Sent.....	29	.....	134	.....	1	.....	164	204
Received.....	24	.....	15	.....	1	.....	40	
Portland:								
Sent.....	2	36	41	3	4	.....	86	126
Received.....	.....	24	19	4	3	.....	40	
Porto Bello:								
Sent.....	13	196	66	7	6	.....	218	373
Received.....	8	102	31	11	3	.....	155	
Portsmouth:								
Sent.....	15	57	75	1	2	.....	150	280
Received.....	10	59	59	.....	2	.....	130	
Puget Sound:								
Sent.....	69	19	4	3	10	.....	105	276
Received.....	98	25	40	2	6	.....	171	
San Diego:								
Sent.....	390	6	2	.....	108	.....	506	644
Received.....	.....	6	3	.....	129	.....	138	
San Juan:								
Sent.....	58	2	.....	.....	20	.....	80	223
Received.....	95	.....	29	.....	19	.....	143	
St. Augustine:								
Sent.....	95	8	34	.....	5	.....	142	257
Received.....	63	9	38	.....	5	.....	115	
Stika:								
Sent.....	14	416	30	6	116	.....	582	1,144
Received.....	12	434	.....	6	122	.....	562	
Tatoosh:								
Sent.....	21	96	65	.....	.....	.....	182	242
Received.....	19	24	17	.....	.....	.....	60	
Unalga:								
Sent.....	26	8	36	48	12	.....	130	251
Received.....	21	8	36	46	10	.....	121	
O. F. M. messages:								
Sent.....	.....	.....	.....	.....	.....	.....	.....	10,785
Received.....	.....	.....	.....	.....	.....	.....	.....	11,657
Total.....	.....	.....	.....	.....	.....	.....	.....	22,442

TABLE B.—*Report of commercial messages, with the number of words, handled by each station for year ending Dec. 31, 1913.*

Stations.	1912		1913							
	December.		January.		February.		March.		April.	
	Mes- sages.	Words.	Mes- sages.	Words.	Mes- sages.	Words.	Mes- sages.	Words.	Mes- sages.	Words.
Charleston.....					30	507	54	670	51	662
St. Augustine.....					2	24	2	28	4	71
Jupiter.....					35	439	37	498	20	479
Key West.....	65	892	257	4,097	314	5,987	287	5,014	130	2,542
Guantanamo.....					15	168	12	140	11	140
San Juan.....					187	2,692	180	2,995	181	2,405
Colon.....					266	3,904	247	3,668	163	2,379
Unalga.....							1	17	5	82
Dutch Harbor.....			2	33	5	85	7	112	10	115
Kodiak.....			4	53	16	265	11	162	19	314
Cordova.....			10	187	22	403	43	593	33	485
Sitka.....							3	44	1	30
Tatoosh.....							3	56	10	143
North Head.....					1	17	2	23	6	84
Cape Blanco.....							3	50	2	33
Point Arguello.....									2	30
San Diego.....							11	331	67	1,609
Total.....	65	892	273	4,370	902	14,492	912	14,401	775	11,603

Stations.	1913									
	May.		June.		July.		August.		September.	
	Mes- sages.	Words.	Mes- sages.	Words.	Mes- sages.	Words.	Mes- sages.	Words.	Mes- sages.	Words.
Charleston.....	56	627	74	938	55	636	38	467	34	396
St. Augustine.....	11	156	5	58	1	17	2	32	4	52
Jupiter.....	34	528	22	229	36	495	20	260	11	158
Pensacola.....							2	36	5	81
Key West.....	153	1,756	140	1,987	112	1,303	150	2,063	145	1,789
Guantanamo.....	32	397	18	245	23	262	19	216	17	178
San Juan.....	104	1,393	144	1,919	164	2,018	141	2,007	160	2,030
Colon.....	126	1,737	99	1,224	83	1,097	121	1,534	87	1,010
Balboa.....			53	768	69	1,119	39	531	67	901
Fribilof Islands.....	4	50	22	557	20	386	36	593	14	201
Unalga.....	41	771	58	944	61	1,182	59	1,625	21	402
Dutch Harbor.....	40	672	35	700	46	798	46	697	22	346
Kodiak.....	25	365	35	546	46	872			2	45
Cordova.....	43	743	53	754	101	1,303	77	1,213	46	305
Sitka.....			21	421	105	1,818	36	542	35	638
Tatoosh.....	3	56	9	152	4	57	12	158	5	61
North Head.....	27	349	22	386	12	294	22	443	17	247
Cape Blanco.....	11	184	16	267					2	36
Eureka.....	6	113	13	194	12	323	15	351	2	54
Point Arguello.....	8	98	3	30	1	18	3	37	2	37
San Diego.....	200	4,804	218	5,037	143	3,366	138	2,809	285	8,046
Guam.....					20	298				
Total.....	924	14,799	1,060	17,356	1,112	18,135	976	15,644	963	17,513

TABLE B.—*Report of commercial messages, with the number of words, handled by each station for year ending Dec. 31, 1913—Continued.*

Stations.	1913						Year total.	
	October.		November.		December.			
	Messages.	Words.	Messages.	Words.	Messages.	Words.	Messages.	Words.
Charleston.....	52	688	48	561	38	427	539	6,569
St. Augustine.....	1	16	4	51	.....	.....	36	505
Jupiter.....	17	318	34	290	209	1,000	485	5,384
Pensacola.....	.....	.....	16	315	8	42	26	474
Key West.....	140	1,598	180	3,181	208	2,637	2,331	34,876
Guantanamo.....	41	449	53	573	25	285	266	3,063
San Juan.....	183	3,325	191	2,669	170	2,353	1,814	25,806
Colon.....	107	1,368	114	1,590	115	1,577	1,528	21,088
Balboa.....	68	1,063	76	1,220	105	1,838	477	7,440
Pribilof Islands.....	5	80	2	18	.....	.....	103	1,885
Unalga.....	3	45	2	20	.....	.....	251	5,088
Dutch Harbor.....	7	104	12	177	3	60	235	3,900
Kodiak.....	15	233	15	295	10	161	198	3,311
Cordova.....	40	579	31	795	431	14,454	930	22,814
Sitka.....	21	365	6	90	239	3,806	467	7,754
Tatoosh.....	10	324	23	521	19	351	98	1,879
North Head.....	5	83	3	47	3	62	120	2,035
Cape Blanco.....	2	31	2	39	2	51	40	691
Eureka.....	1	16	1	23	3	41	53	1,115
Point Arguello.....	2	23	1	25	.....	.....	22	298
San Diego.....	442	9,471	599	12,029	712	14,638	2,815	62,140
Guam.....	.....	.....	.....	.....	.....	.....	20	298
Total.....	1,162	20,179	1,413	24,519	2,295	44,473	12,854	218,408

TABLE C.—*Total amount of shore station charges collected on commercial messages through shore stations for year ending Dec. 31, 1913.*

Stations.	1912	1913					
	Decem-ber.	January.	Febru-ary.	March.	April.	May.	June.
Charleston, S. C.....	\$31.06	\$40.92	\$40.86	\$39.24	\$58.14
St. Augustine, Fla.....	1.44	1.68	4.26	9.42	2.48
Jupiter, Fla.....	26.58	30.06	31.02	33.00	14.88
Key West, Fla.....	\$116.52	\$504.60	719.52	615.48	324.24	227.76	255.00
Guantanamo Bay.....	14.00	13.04	11.28	33.52	20.40
San Juan, P. R.....	221.68	245.92	201.28	117.12	159.76
Colon, Panama.....	322.56	304.72	189.84	146.16	100.16
Balboa, Isthmian Canal Zone.....	62.80
Pribilof Islands, Alaska.....	3.15	101.85
Unalga, Alaska.....	85	21.95	204.00	210.60
Dutch Harbor, Alaska.....	1.65	17.80	18.35	19.40	80.70	97.85
Kodiak, Alaska.....	8.05	36.75	24.30	43.75	47.40	92.15
Cordova, Alaska.....	9.50	20.15	31.55	24.95	40.40	41.60
Sitka, Alaska.....	2.20	1.50	.....	32.40
Tatoosh, Wash.....	4.48	11.76	4.48	12.24
North Head, Wash.....	1.36	6.67	7.34	36.63	72.97
Cape Blanco, Oreg.....	4.00	2.64	14.96	21.76
Eureka, Cal.....	22.46	61.14
Point Arguello, Cal.....	2.56	8.00	2.40
San Diego, Cal.....	28.64	111.60	374.64	403.68
Total.....	116.52	523.80	1,412.92	1,370.86	1,060.23	1,443.04	1,816.26

TABLE C.—Total amount of shore station charges collected on commercial messages through shore stations for year ending Dec. 31, 1913—Continued.

Stations.	1913						Total.
	July.	August.	September.	October.	November.	December.	
Charleston, S. C.....	\$38.46	\$29.40	\$25.20	\$43.86	\$35.58	\$27.24	\$400.96
St. Augustine, Fla.....	1.02	1.92	2.18	.96	3.36	.....	30.72
Jupiter, Fla.....	30.36	16.08	9.48	19.32	24.18	147.12	382.08
Pensacola, Fla.....	.....	2.16	4.86	.....	19.50	2.64	29.16
Key West, Fla.....	170.04	133.06	111.24	98.22	190.62	160.02	3,635.34
Guantanamo Bay.....	22.24	13.38	11.16	28.86	39.12	17.94	224.94
San Juan, P. R.....	169.92	126.00	126.36	163.54	166.14	148.62	1,851.34
Colon, Panama.....	80.48	94.98	62.64	82.06	92.46	100.20	1,576.26
Balboa, Isthmian Canal Zone...	93.36	33.78	56.88	66.30	76.74	113.70	508.56
Pribilof Islands, Alaska.....	21.20	82.15	24.60	3.10	3.25	.....	236.20
Unalga, Alaska.....	268.70	406.35	52.45	11.25	5.00	.....	1,181.15
Dutch Harbor, Alaska.....	108.20	91.10	35.70	4.00	18.85	4.50	498.10
Kodiak, Alaska.....	118.55	.....	11.60	30.55	35.45	20.55	460.10
Cordova, Alaska.....	96.97	92.72	80.36	36.38	34.72	660.15	1,190.45
Sitka, Alaska.....	91.90	27.20	32.35	18.40	4.55	426.38	627.68
Tatoosh, Wash.....	4.56	8.54	3.72	9.96	27.48	21.06	108.26
North Head, Wash.....	66.27	53.10	17.20	14.43	9.11	14.26	290.34
Cape Blanco, Oreg.....	.....	.....	2.16	1.92	2.34	3.05	52.84
Eureka, Cal.....	84.65	74.26	13.50	4.00	1.38	7.97	269.26
Point Arguello, Cal.....	1.44	1.44	2.22	.60	.....	.....	18.06
San Diego, Cal.....	270.56	169.96	408.38	571.68	707.64	867.42	3,913.20
Guam.....	15.05	.....	.....	.....	.....	.....	15.05
Total.....	1,753.93	1,457.60	1,096.24	1,214.41	1,506.47	2,772.83	17,535.11

TABLE D.—Number of commercial messages and words handled by ships of the Navy for year ending Dec. 31, 1913.

Ships.	Messages.	Words.	Ships.	Messages.	Words.
Alabama.....	7	122	Montana.....	1	8
Albany.....	3	44	Nashville.....	2	19
Alert.....	6	74	Nebraska.....	17	254
Annapolis.....	193	4,800	New Hampshire.....	72	1,507
Arethusa.....	2	34	New Jersey.....	52	662
Arkansas.....	32	512	North Dakota.....	27	386
Barney.....	1	22	Ohio.....	72	1,164
Birmingham.....	5	102	Orion.....	1	14
Buffalo.....	28	435	Ozark.....	3	30
Brutus.....	2	19	Paducah.....	4	24
Caesar.....	1	17	Panther.....	2	25
California.....	1,656	32,249	Patapasco.....	1	9
Castine.....	6	78	Perry.....	2	28
Chester.....	10	129	Petrel.....	6	268
Colorado.....	9	141	Pittsburgh.....	769	17,118
Connecticut.....	25	300	Potomac.....	3	57
Cummings.....	1	15	Prairie.....	22	332
Delaware.....	25	352	Proteus.....	8	147
Denver.....	29	693	Raleigh.....	5	113
Des Moines.....	14	425	Rhode Island.....	79	2,319
Dixie.....	5	77	Roe.....	1	17
Drayton.....	1	32	St. Louis.....	6	96
Duncan.....	3	37	San Francisco.....	3	32
Eagle.....	10	103	Saratoga.....	2	22
Florida.....	1	12	Solace.....	7	86
Flusser.....	3	55	South Carolina.....	21	361
Galveston.....	3	81	South Dakota.....	132	2,027
Georgia.....	31	421	Tacoma.....	91	2,138
Glacier.....	48	807	Tennessee.....	1	12
Hancock.....	1	20	Terry.....	1	22
Hannibal.....	11	140	Tonopah.....	1	17
Idaho.....	14	189	Truxtun.....	4	64
Illinois.....	21	324	Utah.....	36	643
Iris.....	4	55	Vermont.....	28	435
Jason.....	1	23	Virginia.....	4	52
Jenkins.....	4	57	Vulcan.....	1	12
Jupiter.....	7	182	Vixen.....	2	29
Kansas.....	35	496	Walke.....	1	24
Lebanon.....	1	20	Warrington.....	1	13
Louisiana.....	70	1,919	Wheeling.....	50	1,916
Mars.....	1	21	Whipple.....	4	71
Maryland.....	687	14,427	Wyoming.....	149	2,926
Mayflower.....	8	149	Yankton.....	1	15
McCall.....	2	61	Yorktown.....	48	1,177
Michigan.....	80	1,572			
Minnesota.....	7	173			
			Total.....	4,856	98,766

TABLE E.—*Total amount of ships' charges collected on commercial messages through naval ship stations for period Apr.-Dec. 31, 1913.*

Ships.	Ship's charge.	Ships.	Ship's charge.
Alabama.....	\$0.60	Nashville.....	\$0.96
Albany.....	1.63	Nebraska.....	8.64
Alert.....	2.56	New Hampshire.....	41.22
Annapolis.....	176.20	New Jersey.....	6.50
Arkansas.....	4.92	North Dakota.....	8.72
Birmingham.....	2.48	Ohio.....	1.36
Buffalo.....	17.00	Orion.....	1.56
Cesar.....	.68	Paducah.....	1.72
California.....	1,242.92	Panther.....	1.40
Castine.....	2.72	Patapsco.....	.40
Chester.....	1.76	Perry.....	.90
Colorado.....	5.76	Petrel.....	9.40
Connecticut.....	3.24	Pittsburgh.....	653.60
Delaware.....	1.44	Prairie.....	5.52
Denver.....	23.24	Proteus.....	2.36
Des Moines.....	.88	Raleigh.....	4.16
Dixie.....	.96	Rhode Island.....	68.20
Eagle.....	2.88	San Francisco.....	.80
Galveston.....	2.72	St. Louis.....	3.88
Georgia.....	8.76	Saratoga.....	.40
Glacier.....	28.92	Solace.....	.84
Hannibal.....	2.52	South Carolina.....	6.80
Idaho.....	4.08	South Dakota.....	52.92
Illinois.....	8.64	Tacoma.....	91.22
Iris.....	1.76	Tennessee.....	.48
Jenkins.....	1.52	Truxtun.....	.48
Jupiter.....	4.24	Utah.....	14.30
Kansas.....	7.84	Vermont.....	9.52
Lebanon.....	.80	Virginia.....	1.32
Louisiana.....	17.12	Vulcan.....	.48
Mars.....	.84	Wheeling.....	71.96
Maryland.....	530.70	Whipple.....	.96
Mayflower.....	1.12	Wyoming.....	28.50
Michigan.....	64.66	Yorktown.....	41.40
Minnesota.....	2.96		
McCall.....	2.44		
Montana.....	.40		
		Total.....	3,325.41

NOTE.—For messages from persons in the naval service originating on naval ships there are no charges. Ships' charges are collected on all messages, except official, addressed to ships.

REPORT OF THE CHIEF OF THE BUREAU OF ORDNANCE.

NAVY DEPARTMENT,
BUREAU OF ORDNANCE,
Washington, D. C., September 23, 1914.

From: Bureau of Ordnance.

To: The Secretary of the Navy.

Subject: Annual report for the fiscal year 1914.

1. The annual report for the fiscal year 1914 is herewith submitted. In pursuance of the departments' policy the bureau has fostered additional competition in the supply of ordnance material, both with a view to widening the source of supply as well as to enable the Government to induce competition as to quality and price. In all respects the efforts have met with success and reports have been made to the department from time to time exemplifying this fact.

2. The first place in the bureau's activities has been given to improving the ordnance material for the service. Such progress as has been made is reported elsewhere.

3. A system has been instituted by which the chief of the bureau is advised of any delay in filling requisitions from ships so that the failure may be corrected and the matter followed up at once. Owing to the unexpected movements of ships the problem of supplying them promptly is not always an easy one. However, a vigorous effort is being made to reduce the delays to a minimum.

GUNS.

4. The manufacture of guns required to arm the *Oklahoma* and *Nevada* has been completed, and the manufacture of guns for the *Pennsylvania* and *Arizona*, and for the destroyers and auxiliaries under construction, has been carried on without interruption by the Washington Navy Yard, the Watervliet Arsenal, the Bethlehem Steel Co., the Midvale Steel Co., and the American & British Manufacturing Co.

5. The modification and replacement of 6-inch 50-caliber Mark VI guns has been completed, and all vessels have been equipped with 2,800 foot-second guns of the same ballistic qualities.

6. The modification and replacement of 5-inch 50-caliber Mark V guns has proceeded as rapidly as these guns are available, and will be completed within two years. In the modified form these guns are equal in all respects to the latest 5-inch 50-caliber guns.

7. The work of relining eroded guns has progressed most satisfactorily during the year, and about 100 guns of 8-inch caliber or above have been relined, besides numerous guns of lesser caliber.

8. The 5-inch cartridge-case guns of the *Florida* and *Utah* have been replaced by bag guns, and the 5-inch batteries of the *Arkansas* and *Wyoming* will be replaced during the next overhaul period of

these vessels. This will give all vessels of the *Utah* class and later date the same type of torpedo-defense gun.

9. Numerous batteries of 3-inch and 4-inch guns have been replaced by later types of guns, and a constant effort has been made to bring all vessels' batteries up to date as far as possible. The installation of salvo latches and improved-type gas ejectors on all guns has progressed, and at the present date nearly all guns are provided with modern outfits.

10. The replacement of all 3-inch rapid-fire gun breech mechanisms with the eccentric plug mechanism has progressed, and the few remaining vessels will be equipped this year, thus completing the replacement of over 400 of these mechanisms.

11. The bureau has begun the assembling of all reserve guns into batteries for issue to auxiliaries in time of hostility, and a number of these guns are now ready for issue. All remaining guns are being assembled into reserve batteries as rapidly as possible.

12. The bureau is still continuing its investigations on the subject of erosion, and systematic collection of data is being made, in addition to minor improvements in type of rifling and shell bands.

13. Three hundred Colt's automatic machine guns have been modified to take the same ammunition as the service rifle. Over 200 Benet Mercie machine guns have been slightly modified to eliminate certain defects in design. The work of modifying both types of machine guns has been progressive in order that guns may be retained for use in service as needed.

14. All vessels in active service have been supplied with Springfield rifles and automatic pistols. The Krag-Jørgensen rifles are being used for the sake of economy in subcaliber attachments.

15. The Model 1910 Army Infantry equipment having been made standard for the Army, Navy, and Marine Corps, the bureau purchased and issued this form of equipment to the ships of the Atlantic Fleet. As soon as the supply of old equipments which were turned in by the fleet has been exhausted the bureau will issue the Model 1910 equipments to other vessels progressively. By this means the discarding of good material will be avoided.

GUN MOUNTS.

16. The contractors for the *Oklahoma* and *Nevada* have received all material furnished by the bureau for the 14-inch mounts of those vessels. One triple slide and two sets of deck lugs for the *Pennsylvania* have been delivered. Considerable delay has been caused in Government deliveries through rejections of slide castings which have been furnished on private contract. It is expected, however, that the deliveries for the *Pennsylvania* and *Arizona* will be made in adequate time to prevent delay in construction.

17. Arrangements have been made to cross-connect turret elevating gear on all dreadnoughts, including those now building. This work is already authorized.

18. The 14-inch mounts for battleships 40, 41, and 42 will be built at the Washington Navy Yard in toto, except castings for all three ships and complete slides for one ship. These will be obtained on contract.

19. Director control was first tried on the *Delaware*, and while the results were considered indeterminate another trial was made at regular target practice in which the score of that ship could be compared with those of the other competing vessels. A careful study of the scores indicates that the idea possesses value, although not to so great an extent as was claimed by some enthusiasts. In consequence, director installations have been authorized for the *Michigan*, *Wyoming*, *Utah*, *North Dakota*, *South Carolina*, and *New Hampshire*, in addition to the *Delaware*, already installed. It is proposed to extend this authority to the *Arkansas*, *Florida*, *New York*, and *Texas*. If the experiment on the *New Hampshire* proves satisfactory, the installation may be placed on all predreadnoughts as soon as funds are available. These installations are additional, and do not affect the individual handling of the guns.

20. The 5-inch mounts for the *Oklahoma*, *Nevada*, *Bushnell*, and *Melville* have been completed, and those for the *Pennsylvania* are well under way. The 4-inch mounts for destroyers 51 to 56 are well under way and will be ready for the ships as needed. All spare mounts of all broadside types are being assembled at the various navy yards into reserve batteries which will be complete in all respects and ready to be used on auxiliaries in time of need. In order to reduce the expense of the various fittings for electric gun firing and lighting circuits for all guns and mounts, the bureau adopted a standard type of circuit for all vessels. Complete instructions for standardizing these circuits have been issued. This standardization will materially reduce expenditures, as the fittings will be manufactured in bulk and assembled for issue in stock at the Washington Navy Yard.

PROJECTILES.

21. During the past year the specifications used in the purchase of armor-piercing projectiles have been so modified as to make the acceptance conditions more rigid, and it is thought that as a result of this a higher quality of projectiles is obtained. As the result of the encouragement of competition the prices of armor-piercing, common, and target projectiles have been greatly reduced, and the prices of projectiles now being purchased under contracts awarded during the past year are lower than ever before.

22. Preliminary steps have been taken by the bureau toward the acquisition of a foreign system for the manufacture of projectiles, should the efficacy of such a system be demonstrated to the satisfaction of the bureau.

23. The bureau is still more than ever inclined to the opinion that the best possible type of projectiles for the attack of armored vessels is the armor-piercing projectile, carrying sufficient explosive to detonate and fragment the projectile after having passed through armor; and it is thought that the penetrative power of projectiles has been increased to such an extent as to insure a satisfactory percentage of success.

24. Experimental firings have been conducted at the proving ground with projectiles of foreign manufacture and with projectiles of various shapes, in order to ascertain the relative qualities of each. In order to ascertain what progress has been made in the

quality of armor-piercing shell there were recently fired at Indianhead armor-piercing shell manufactured in 1903, which at that time were extraordinarily efficient. These shell were fired at the same plate in competition with the highest grade of shell of recent manufacture, and it was found that the shell being produced to-day possess great superiority over those considered the best 11 years ago. Inasmuch as the sole measure of the efficiency of armor is furnished by its test with armor-piercing shell, these experiments are an important witness to a like advance in the quality of the armor now being furnished.

SMOKELESS POWDER.

25. There were manufactured at Indianhead during the past fiscal year 3,352,388 pounds of smokeless powder. Of this amount 2,338,448 pounds were new powder and 1,013,940 pounds were old powder reworked on account of loss of stability or unsuitability of granulation.

26. During the same period deliveries were made by private manufacturers as follows: 1,559,358 pounds from the Carney's Point plant, and 605,535 pounds from the Haskell plant of the E. I. du Pont de Nemours Powder Co., and 1,111,737 pounds from the Parlin plant of the International Smokeless Powder & Chemical Co.

27. It will thus be seen that the proving ground is now manufacturing more than one-half of the powder acquired.

28. Due to the increased output at the Indianhead plant, and to the economies instituted in the consumption of fuel and the saving of solvent, besides a lower cost for purchased mixed acid and alcohol, the cost of powder at Indianhead has been considerably reduced.

29. A new system of nitration is being installed which it is hoped will further reduce the cost, and this reduction will be augmented by a lower price for nitrate of soda than has been quoted for several years past.

30. The experiments in regard to increasing the amount of stabilizer in the powder and experiments in regard to high temperature drying have been completed but definite conclusions can not yet be drawn, as it is necessary to keep these powders stored for a long time before they show signs of deterioration. The bureau has also been experimenting with other methods of quick drying. Experiments are also under way in regard to the form of powder grains.

31. Another year has been added to the history of stabilized smokeless powder and it confirms the good record already obtained with this method of improving the ~~loping~~ qualities.

32. Experimental charges have been tried, in which the grains are regularly piled in the bag, as was done in the case of brown powder. The reduction in volume of the assembled charge amounts to 37½ per cent. The advantages presented by such an arrangement are so important as to warrant the bureau in attempting to devise machinery by which charges can be put up in that way. The advantages are greater latitude in the size of the grain; smaller stowage room required in the magazines; stiffer charges more easily handled and loaded; decreased destructive effect on the powder bag; and decreased diameter of the breech plug with consequent decreased length of plug, making it lighter; and finally, slightly decreased length of the gun.

ARMOR.

33. Deliveries of armor have been made during the fiscal year of 1914 as set forth in the subjoined table.

Ships.	Bethlehem Steel Co.	Carnegie Steel Co.	Midvale Steel Co.	Total.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Oklahoma.....	542.58	1.07	.....	543.65
Nevada.....	2,226.53	2,908.59	.....	5,135.22
Pennsylvania.....	1,268.24	.....	2,499.06	3,767.30
Arizona.....	.....	.....	1,298.06	1,298.06
Miscellaneous.....	110.00	220.00	.....	330.00
Total.....	4,147.45	3,129.66	3,797.12	11,074.23

34. Contracts for approximately 8,000 tons of armor required for the *Arizona* were let during the year, and about 1,300 tons of this armor has been delivered. There still remains to be delivered a small amount of armor for the *Oklahoma* and *Nevada*; however, it is expected that all of the armor for these two vessels will be delivered prior to October 1, 1914.

35. New conning towers were purchased for the *North Dakota*, *Minnesota*, and *Louisiana*, and contract was placed for furnishing a new conning tower for the *Connecticut*. Upon the delivery and installation of all these conning towers all battleships subsequent to the *Virginia* class will be supplied with conning towers of the most modern design.

36. The question of the cost of armor has been receiving the department's attention, and in the last naval-appropriation act, approved June 30, 1914, provision was made for the appointment of a committee to investigate and report at the next session of Congress upon the cost of erection of an armor plant, and the cost of armor made by this armor plant.

37. Upon awarding contract for the armor of the *Arizona* the price was lowered \$14 per ton in the case of classes A-1 and A-2 armor, \$25 per ton in the case of class B armor, and \$100 per ton in the case of class C steel armor. All heavy armor is now being made of the K. C. type, and no trouble has been experienced with these plates spalling.

38. A number of experiments have been made with a view to determining the relative value of armor placed at various angles to the line of fire. A number of experimental plates have been fired at with a view to developing a more efficient type of armor. A compound plate was submitted, consisting principally of copper with a layer of steel. The results of the test of this plate showed it to be inferior to the existing type of armor. One company submitted a manganese armor plate, which gave no promise on test. A cast-steel plate was submitted, but was proved to be without value.

TORPEDOES.

39. The torpedo situation, both as to design and to the numbers on hand, has improved considerably during the past year. The bureau is having conducted at the torpedo station exhaustive experiments, with a view of obtaining a large increase in range and speed with the present design of torpedoes. From the results of experiments conducted so far this summer the range has been increased to a

marked degree, and a further advance in range and speed will probably be obtained. An increase in speed to the extent hoped for will establish firmly the torpedo as a battleship weapon, a position for it that was long rendered doubtful by the great increase in effective gun range made possible by modern target shooting. The longer range and speed will also be an improvement to destroyers by enabling these vulnerable vessels to strike blows at a distance which would render their survival much more probable.

40. The number of effective torpedoes on hand has increased during the year by about 355, as follows:

Manufactured at the torpedo station.....	75
Rebuilt at the torpedo station.....	87
Received from contractors.....	233
	<hr/>
	395
Lost by vessels of the fleet, about.....	40
	<hr/>
	355

The loss of 40 torpedoes per annum, while showing improvement over the experience of previous years, still leaves much to be desired in this respect.

41. In order to increase the output of torpedoes by Government plants, the bureau is increasing the capacity of the torpedo station to 150 torpedoes per year, and by direction of the department has placed an order with the Washington Navy Yard for the manufacture of 100 torpedoes. Since there is but one private torpedo manufacturer in this country, it is considered advisable to be in a position to manufacture a large percentage of torpedoes required in Government plants, and all of them if necessary. This will not only tend toward the decrease of cost of torpedoes to the Government, but should work toward the development of the torpedo by having two Government plants in competition with each other and with domestic manufacturers.

42. The reserve allowance of torpedoes should accumulate quite rapidly from now on, as the bureau has outstanding contracts for about 650 torpedoes undelivered from domestic manufacturers and 390 undelivered by Government plants. The bureau also has appropriations available for the purchase or manufacture of about 550 torpedoes, which will be ordered in the near future.

43. The torpedo situation is developing very satisfactorily with the exception of modern torpedoes for battleships anterior to the *Nevada* and *Oklahoma*, for cruisers of the *Tennessee* class, and for the scouts. At present all these vessels are equipped with a short-range torpedo which may be considered obsolete for the battle fleet. The bureau has obtained appropriations and is having manufactured 350 long-range torpedoes for these vessels, but to accumulate the necessary allowance and reserve and allow for yearly losses will require appropriations for about 500 more of these torpedoes. This is the most serious part of the torpedo situation, and the bureau will ask for half the amount necessary to purchase them in its annual estimates.

44. The bureau's recommendations, approved by the department, to change the torpedo armament of destroyers 51 to 56 from a short to a long range torpedo, will place those destroyers, already partially completed when the recommendation was made, on an equal footing

with the latest design of destroyers. All destroyers subsequent to *No. 50* will be equipped with long-range torpedoes within the next two years.

45. The bureau is of the opinion that the torpedo material has developed much more rapidly than the torpedo personnel. In order to reduce the loss of torpedoes at various torpedo practices which are necessary to develop the personnel, the bureau is endeavoring to perfect a scheme of firing all torpedoes at practice with positive buoyancy and in deep water. This plan looks promising and, if developed, will probably decrease the loss of torpedoes.

TORPEDO NETS AND NET CUTTERS.

46. The torpedo station has developed a satisfactory net cutter which will operate at almost any degree of obliquity with the net, and these net cutters are being manufactured for all long-range destroyer torpedoes and for all torpedoes for the new submarines. The bureau has not yet purchased the torpedo nets for the *Oklahoma* and *Nevada* and subsequent battleships, but has been experimenting with net cutters and with nets with a view to determining, if possible, the kind of net that would be most effective. The possession of a successful net cutter again places in doubt the value of the torpedo net. However, some percentage of failures will occur with almost any device, and it is probable that the best net cutter will have its share. This places the net in somewhat the same position that armor occupies—that it will not invariably keep out all shell, but that it will have a certain percentage of success—and the question arises as to whether the net is worth the sacrifice made for its use. While the value of this torpedo defense would be greatly enhanced by having a double net, the inner net must be carried so close to the skin of the ship as to render it vulnerable to the large explosive charges now used in modern torpedoes.

TORPEDO TRAINING SHIP.

47. The substitution of the *Montana* for the *Montgomery* as a torpedo training ship should prove of vast benefit to the service. Since her assignment to this duty the *Montana* has been fitted out with the latest marks of torpedo tubes and torpedoes so that now we are able not only to thoroughly instruct the personnel before being assigned to torpedo duty but to test all classes of torpedo tubes and torpedoes at the highest rate of speed under which they would be fired in battle. Much will be learned of torpedo defects from trained observers highly skilled in the use of this weapon, besides which it is the intention of the Bureau of Navigation to send only graduates of this systematic course of instruction as torpedo officers of ships. It is believed that this will increase the torpedo efficiency of the fleet far more than anything else can.

MINES.

48. The mine situation is improving slowly, and the bureau is adding to its stores, by both purchase and manufacture, a considerable number of the anchored contact type. The bureau has manufactured and tested 100 type electric floating mines, which appear very satisfactory. There are also being manufactured 100 type percussion floating mines for test in comparison with the electric mines. All of these mines

will be sent to the fleet for practical test afloat. Either kind can be manufactured quickly in large quantities.

FUSES.

49. The bureau has been carrying out a number of experiments throughout the year looking to an improvement of all its fuses, especially the detonating fuse. These experiments promise satisfactory results. The quality and reliability of the night tracer have been greatly improved during the year.

50. Recent experiments with a high-velocity time fuse indicate very promising results. It is too soon, however, to say that we have at last solved the very vexing question of providing an efficient time fuse that will remain efficient throughout a long period of storage. The successful accomplishment of such a result means so much that the bureau is bending every energy to provide this highly essential feature of shrapnel fire.

ALLOWANCE LISTS.

51. Broadside battery allowance lists for all vessels have been prepared by a board ordered for the purpose. Their work consisted principally in reducing the number of accessories furnished with broadside batteries and substituting tools of good commercial manufacture for the more costly ones especially made at the gun factory. It is found that such tools can be purchased from the manufacturers, of good quality and at lower cost, thus affording a ready source of supply. This is, of course, due to the larger numbers produced by commercial firms.

EXPERIMENTS AND DESIGN.

52. The design of the bureau 3-inch submarine gun and mount has been completed. This is a water-tight mount, possessing distinct advantages in compactness and readiness for quick use over any known types of submarine mounts and is a radical departure from known designs. Submarines of the *L* and *M* classes, now under construction, will be armed with this weapon.

53. Designs for 3-inch, 4-inch, and 1-pounder antiaeroplane guns have been completed. The manufacture of an experimental 1-pounder gun has been completed and one 3-inch 50 caliber is nearly so. It is proposed to experiment with these types of guns on kites towed by aeroplanes, in order to obtain data on the most efficient gun for the purpose.

FIRE CONTROL INSTALLATIONS.

54. The development of fire-control instruments has progressed satisfactorily during the past year. Beginning with the *New York* and *Texas* the range finders of 20-foot base and over are mounted in protected positions in the turrets. By means of the range transmitters attached to these instruments, the range is made available in the plotting room the instant it is obtained. This is accomplished by visual means, thus eliminating confusion and mistakes incident to transmitting information over telephone or voice tube.

55. An automatic plotting instrument is being developed which promises to give a means of utilizing the range finders to the best

advantage and increases the value of these instruments considerably. Manual plotting has been found too slow and inaccurate for the exact results necessary and time available in action.

56. The target turret system now being installed in the new ships gives a very satisfactory means of directing the fire at the proper targets and checking up all turrets to see that each is on the target assigned.

57. Attention is now being directed toward perfecting the automatic plotting instrument and developing a more satisfactory range clock than the one now in general use in the service.

ADVANCE BASE.

58. Advance-base maneuvers were carried out by the Marine Corps at Culebra Island during the winter of 1914. As a result of these, slight changes in the battery have been recommended. The advance-base outfit, though not as yet complete, has been made very efficient as a result of the past year's expenditures. An increase in the number of main battery guns and the elimination of the 3-inch 50 caliber gun for advance-base purposes have been directed. The number of searchlights provided for fire control was not adequate, and more could not be purchased because of lack of time and funds. It is hoped that sufficient searchlights can be provided during the coming year.

DEFENSES AT GUAM.

59. Until such time as the permanent defense of the island of Guam is completed it was thought advisable for the Navy to install efficient temporary defenses for that island. The bureau, with the cooperation of the Marine Corps, has furnished the material and is installing on a comprehensive scheme an efficient temporary defense in Guam. This work is well under way.

LANDING OPERATIONS AT VERA CRUZ.

60. The operations on shore at Vera Cruz in the month of April made no special demands on the bureau's resources except in the matter of small-arms and field-gun ammunition. Ample provision for this contingency with respect to small-arms ammunition had been made, and a large supply of it, in addition to the fleet's regular allowance, had been provided and was with the fleet. Besides this a large store of small-arms ammunition was ready at Guantanamo. Each ship had on board its allowance of machine guns, and an extra number were stored at Guantanamo for use in case the commander in chief desired them. The allowance of shrapnel for landing guns has never been such as to contemplate protracted operations on shore. In view, however, of the possibilities of this occurring in the future the bureau has doubled the number of shrapnel per gun provided for each ship.

KEYPORT TORPEDO STATION.

61. The land for the new torpedo station at Keyport, Puget Sound, has finally been turned over to the Government and the construction of a firing wharf and combination storehouse and repair shop for the use of vessels on the west coast begun. After this station is in operation torpedoes in the Pacific can be repaired and

ranged at Keyport, thus obviating the necessity of their return to Newport, involving long delay and expense. The machine shop will only be equipped to take care of lesser repairs. It will still be necessary to send a badly wrecked torpedo to the torpedo station at Newport to be rebuilt. The whole scheme should add materially to the torpedo efficiency of the Pacific Fleet, especially submarines and destroyers.

NAVAL GUN FACTORY.

62. The following is a statement of the most important work performed at the gun factory during the year:

Guns, all calibers:	
Completed.....	135
Lined.....	179
Converted, rebuilt, and retubed.....	7
Partly completed (including guns in process of manufacture, being relined, rebuilt, or converted).....	148
Total.....	469
Breech mechanisms:	
New mechanisms completed.....	228
Modified.....	108
Total.....	329
Miscellaneous:	
New and relined guns on contract, and from Watervliet Arsenal, star-gauged, examined, and put in serviceable condition.....	156
Firing mechanisms completed.....	256
Drill guns completed.....	58
Sights completed and partially completed.....	604
Sights overhauled and repaired, and important parts of sights manufactured.....	1, 160
Gun mounts modified, overhauled, and important parts completed.....	1, 257
Torpedo tubes completed or nearly so.....	48
Three-inch shrapnel.....	8, 725
Powder tanks and powder packing boxes.....	30, 014
Cartridge cases.....	32, 378
Primers.....	74, 050
Castings produced in foundry..... pounds.....	3, 819, 711
Forgings..... do.....	1, 278, 450
Ammunition boxes and cartridge-case packing boxes.....	7, 002
Number of shipments made.....	2, 146
Total weight of shipments..... pounds.....	36, 681, 827

63. Additional facilities have been provided for bench and vise work in the breech-mechanism shop. Facilities for repairing optical instruments have been increased, and arrangements made for testing telescopes and rangefinders on a platform erected upon the roof of the old museum, just above the optical shop. One 100-inch lathe and two 42-inch gun lathes have been installed in the gun shops. The facilities in the forge shop, pattern shop, sight shop, and west gun-carriage shop have been increased and improved, and other improvements looking toward economy and efficiency have been instituted.

64. The superintendent recommends, and the bureau heartily concurs therein, that some plan be devised by which a cash reward may be given to any civil employee who may work out an improvement or economy in any manufacturing process or who may submit a design for some important improvement in ordnance material or plant ma-

chinery. This scheme should follow generally that authorized by act of Congress in 1912 for the Ordnance Department of the War Department. In many private manufacturing establishments some such scheme is in vogue.

65. The old foundry has been dismantled and the new foundry put in operation. The shift from the old foundry to the new was done systematically and practically no time was lost. This portion of the plant is now up to date in all respects and is able to turn out castings of the largest size required for ordnance work in steel, cast iron, and bronze. Some difficulty is experienced in keeping the cost of steel castings down to an acceptable figure, due to the fact that the work at a Government plant must necessarily be more or less fluctuating, and this bears especially heavily on a steel foundry. It is hoped to assign additional work to the yard in the near future of such a nature that its manufacture can be carried on when opportunity presents and thus provide a steady flow of work without delaying the needs of the service.

NAVAL PROVING GROUND.

66. In general the work performed by both the proving ground and the powder factory has been considerably greater than that performed during the previous fiscal year, and consequently greater than any year since the station was started.

67. The following is a summary of the proof work performed during the fiscal year:

Guns	518
Mounts	13
Breech mechanisms.....	28
Armor plates	128
Projectiles.....lots	242
Powder	do 94
Cartridge cases.....do	142

68. Much experimental work has been performed, of which 53 items are mentioned in the proving ground report, and many of these experiments are of considerable importance to the service. A system has been devised for measuring under-water pressures due to mine explosions, and an accurate formula determined, which will be of great value. Measurements have been made of the under-water explosive effect of nitrogelatine, guncotton, T. N. T., and explosive D.

69. The dock has been improved and additional swamp land in the valley filled in. A new explosion chamber has been constructed, that will permit of the fragmentation of the largest projectile. The covered butt on the north side of the valley has been improved so as to make it possible to fire explosive shell up to 12 inches caliber at armor plate without much danger to the surrounding territory.

POWDER FACTORY.

70. About 700 tons of ether have been manufactured at a satisfactory cost. Some 2,000 tons of sulphuric acid have been produced at a cost well below the market price. A total of 2,338,448 pounds of new powder was manufactured, and at the same time 1,013,940 pounds of powder was reworked. This shows an increase in powder produced of more than 20 per cent over the figures for last year.

71. Work has been begun on the new project appropriated for in the last naval appropriation bill, with the object in view of increasing the potential capacity of the plant. The new nitrate of soda storehouse has been completed and will store 5,000,000 pounds of soda. A new gravity nitrating house is being constructed and will be put in operation during the new fiscal year.

72. A total of 46 accidents among the force employed at the proving ground has been reported for the year. They are generally of a minor character and none of them serious.

73. In general, the work of the proving ground is being constantly increased and much of the proof work is conducted under great difficulties, due to its limited extent and peculiar geography. The bureau has submitted a recommendation to the department for the purchase of additional land on the left bank of the Potomac below the present reservation. The constantly increasing range of the heaviest guns makes such an addition necessary. The proving ground is particularly hampered in high-explosive shell experiments, and this would be obviated were the additional land provided.

TORPEDO STATION, NEWPORT, R. I.

74. Two hundred and thirty-three new torpedoes were delivered to the torpedo station during the year by contractors. Ninety-nine were turned in from ships, and 148 were issued. Seventeen new outfits were furnished, involving 128 torpedoes, and nine outfits replaced, involving 33 torpedoes. The torpedo station also reports 75 new torpedoes completed and 75 new torpedoes 90 per cent completed. The conversion of 44 Mark III 45 cm. torpedoes to Mark IV Mod. 1 was almost finished at the end of the fiscal year, and 44 Mark I's had 70 per cent of the work of modifying them finished at the same time.

75. One hundred and fifty-five thousand primers of various kinds were manufactured during the year, besides many thousand super-heater fuses, electric detonators, and fuse bridges.

76. The expenditures for the year amounted to \$1,385,843.70. The expenditures for manufactured articles for the year amounted to \$994,442.06, which is an increase of about \$21,000 over the previous year.

77. Carefully prepared plans had been made for the enlargement of the manufacturing capabilities of the torpedo station in advance of the appropriation made by Congress in the naval appropriation act approved June 30, 1914. This has permitted work to be commenced at an early date, and while the designed capacity of the total plant is stated to be 150 torpedoes per annum, the inspector in charge hopes to increase this number to somewhere in the neighborhood of 200.

78. An order for 200 Mark IX torpedoes has been given and this will absorb the \$1,000,000 appropriated for torpedoes at the last session of the present Congress. Recently the bureau has entered into a supplementary agreement with the Bliss Co. by which the testing of a considerable portion of the latter's product will be done at the torpedo station with the increased facilities provided there. This work can well be done in addition to our own testing and will result in a saving to the Government of about \$350 per torpedo. Besides the saving effected we will be enabled to procure

the torpedoes at an earlier date than would be the case if the whole work of testing were thrown on the contractors.

79. A considerable amount of experimental work in connection with torpedoes, mines, new devices, etc., has been conducted.

80. Two schemes are under consideration for obviating circular runs. One of them is located in the warhead and the other is an addition to the mechanism in the afterbody. The latter has been tried and found to be successful, although certain disadvantages are presented which may induce the adoption of the other scheme which is about 60 per cent completed.

81. The instruction of seamen gunners has continued as in the past. New quarters for their accommodation are urgently needed and an estimate has been submitted to the department to provide them. Hitherto they have been housed in a makeshift barracks totally unsuited for the purpose. This frame building is to be removed as having outlived its usefulness and to provide space for the new shops above referred to. At present the men are quartered upon the *Vesuvius* and in other places. This arrangement is inconvenient and should be done away with by the construction of new quarters.

NAVAL MAGAZINES.

HINGHAM, MASS.

82. The magazine building authorized by Congress in the appropriation bill for the fiscal year 1913 has been completed. The sea wall and dock are completed and contribute very much to the expeditious shipping and receiving of ammunition. Minor conveniences have been constructed by magazine labor. Two general magazines should be appropriated for, in order to provide storage for reserve ammunition as fast as it is produced. Many minor improvements have been recommended by the inspector in charge, which will be taken up from time to time. They are all intended to facilitate the handling of ammunition and thereby reduce the expense connected with its receipt and storage.

NEW YORK DISTRICT.

83. The work at the Iona Island magazine has increased by about 14 per cent during the past year. The bureau has directed that all submarine mines be sent to this magazine to be filled with explosive, and this will add considerably to the work over and above the natural increase.

84. The Lake Denmark magazine should constitute the principal storage place for ammunition in this district. It is recommended that the storage capacity for smokeless powder there be largely increased in order to accommodate reserve stores of powder. Estimates have been submitted for coal handling apparatus to cost \$4,500.

FORT MIFFLIN, PA.

85. The resources at Fort Mifflin have been heavily taxed, due to the placing out of commission of ships at the Philadelphia Navy Yard, since in this event it is necessary to discharge the ammunition from a ship and store it in magazines. Ample provision should be made at this station for such cases, considering the fact that the ships in ordinary will in all probability be moored at the Philadelphia Navy Yard. Estimates have been submitted to increase the magazine capacity accordingly.

ST. JULIENS CREEK, VA.

86. The facilities at this magazine have been very much improved by the construction of a new wharf and wharf storehouse. These improvements have contributed very much to reducing the cost of handling material. Additional storage is also required at this station, for the same reasons cited with respect to the magazines reported on above.

MARE ISLAND, CAL.

87. Many minor improvements have been carried out at this station. An automatic sprinkler system was installed in the paint shop, building No. 22, and a hand-controlled sprinkler system on outside of wooden magazine buildings Nos. 23 and 48. The cost of assembling ammunition has been materially reduced during the past year, due to improved machines and methods. The reduction in unit cost amounts generally to 50 per cent, but in some cases far exceeds this. It has been found possible at this magazine to reduce the number of men employed during the year by 14.2 per cent, notwithstanding the fact that the volume of work has increased considerably. This has been accomplished by economy of arrangements in assembling and disassembling ammunition, together with improvements made in the presses.

PUGET SOUND, WASH.

88. Two officers' quarters, one storehouse and bag factory, and one filling house have been completed at this magazine. About 5 per cent of the new sea wall had been completed at the end of the fiscal year.

89. The completion of the Panama Canal will entail additional demands on both this magazine and the one at Mare Island, and the bureau therefore recommends that storage capacity on the west coast be largely increased due to the probable increased activities of the fleet in those waters. Recommendations have elsewhere been made tending to accomplish this object.

STUDENT OFFICERS.

90. The system of instruction for student officers in ordnance has been continued. These officers now form part of the postgraduate classes at the Naval Academy, spending their first four months at the academy and then following a course of practical instruction under the direction of the bureau.

91. The bureau is of the opinion that the system as now established would be improved were the four months' instruction at the Naval Academy omitted. What is desired above all things is, that the student officers be given as thorough a course in the design and manufacture of ordnance material as is possible. This must be supplemented by individual study, for which the regular course at the Naval Academy furnishes a good groundwork. The only trouble with the four months' course at the Naval Academy is that it is too brief a period to furnish instruction in subjects generally abstruse, and this gives rise to the idea that it might be well to omit it altogether and rely upon individuals to make the necessary research while engaged in practical work.

JOSEPH STRAUSS.

REPORT OF CHIEF OF BUREAU OF CONSTRUCTION AND REPAIR.

NAVY DEPARTMENT,
BUREAU OF CONSTRUCTION AND REPAIR,
Washington, D. C., October 10, 1914.

To: The Secretary of the Navy.

Subject: Report of the Bureau of Construction and Repair for the fiscal year ended June 30, 1914.

1. I respectfully submit herewith the report of the bureau for the fiscal year ended June 30, 1914, together with estimates for appropriations required for the fiscal year ending June 30, 1916.

2. The estimates marked "A" are for the salaries of the clerical employees of the bureau. These estimates are identical with the amount appropriated for the fiscal year 1915, with the exception of one clerk at \$1,000 per annum carried on the rolls of the Bureau of Equipment. The Bureau of Equipment having been abolished, the pay of this employee is covered in this bureau's estimates.

3. The estimates marked "B" are for the construction and repair of vessels at navy yards and on foreign stations; the purchase of stores, materials, machinery, articles of equipage at home and abroad, and tools of all kinds; the construction and repair of yard craft; the pay of the clerical, drafting, inspection, and messenger service in navy yards, naval stations, and offices of superintending naval constructors; and the performance of all work for the Navy in the line of construction and repair. This estimate is considerably less than the amounts appropriated for this work during the past five years, as shown on the following table:

Year.	Appropriation "Construction and repair."	Amount allotted from appropriation "Equipment of vessels."	Total.
1911.....	\$8,979,144.00	\$1,399,000.00	\$10,378,144.00
1912.....	8,479,144.00	1,354,000.00	9,833,144.00
1913.....	8,479,144.00	1,359,206.40	9,838,350.40
1914.....	8,250,000.00	1,575,000.00	9,825,000.00
1915.....	¹ 9,788,000.00		9,788,000.00
1916.....	¹ 9,177,127.00		9,177,127.00

¹ Includes equipment work.

4. The estimates for "Improvement of construction plants" cover the improvement of the shipbuilding and repair plants at the several navy yards and naval stations, it having been found desirable in previous years to include estimates for appropriations of this character which may be specifically devoted to the improvement of hull division shops. Such a provision is necessary in order that such work may not depend entirely upon allotments from the general appropriations, since casualties in the fleet, which could not be foreseen or estimated for, may make it impossible to utilize any

considerable portion of the general appropriation for plant improvements. This estimate is the same as the appropriation for the fiscal year ending June 30, 1915.

5. The estimates marked "C" cover the amounts required by the Bureaus of Construction and Repair and Steam Engineering, under the appropriation "Increase of the Navy, construction and machinery" (including submarine torpedo boats) for work on new vessels already authorized by Congress. These estimates for "Increase of the Navy, construction and machinery" (including submarine torpedo boats) for the fiscal year 1916, as has been the case for similar estimates in previous years, do not include any provision for such new vessels as may hereafter be authorized by Congress. For such further information of the department on the subject of appropriations under "Increase of the Navy," there is given below a statement of the amounts actually appropriated for "Increase of the Navy, construction and machinery" (including submarine torpedo boats and colliers) for each of the preceding eight years, and the estimates for the fiscal year 1916 for continuing work on vessels already authorized:

Fiscal year.	Amount appropriated for vessels under old program.	Amount appropriated for first year's work on vessels under new program.	Total.
1908.....	\$12,713,915.00	\$500,000.00	\$13,213,915.00
1909.....	9,832,962.00	9,075,000.00	18,907,962.00
1910.....	16,340,790.00	9,426,033.00	25,766,823.00
1911.....	13,335,724.00	8,470,000.00	21,805,724.00
1912.....	6,922,619.67	8,550,000.00	15,472,619.67
1913.....	6,311,673.00	6,637,500.00	12,949,173.00
1914.....	15,609,091.00	7,562,412.00	23,171,503.00
1915.....	13,073,234.00	10,506,000.00	23,579,234.00
1916.....	\$14,805,803.00		

¹ Includes \$2,000,000 appropriated from the proceeds of sale of the former Idaho and Mississippi toward the construction of a replace vessel.

² Estimate submitted for 1916, for vessels under old program. Includes \$2,600,000 to be appropriated for a vessel authorized by the naval act of June 30, 1914, to replace the former Idaho and Mississippi, the proceeds of sale of these vessels having been deposited in the Treasury.

ESTIMATES SUBMITTED BY THE BUREAU FOR THE FISCAL YEAR 1915-16.

ESTIMATE A.—Salaries.

Detailed objects of expenditures, and explanations:

Chief clerk, at \$2,250.....	\$2,250
2 clerks of class 4, at \$1,800 each.....	3,600
3 clerks of class 3, at \$1,600 each.....	4,800
3 clerks of class 2, at \$1,400 each.....	4,200
3 clerks, at \$1,300 each.....	3,900
3 clerks of class 1, at \$1,200 each.....	3,600
9 clerks, at \$1,100 each.....	9,900
15 clerks, at \$1,000 each ¹	15,000
5 copyists, at \$900 each.....	4,500
2 assistant messengers, at \$720 each.....	1,440
1 laborer, at \$660.....	660
9 messenger boys, at \$600 each.....	5,400
1 messenger boy, at \$400.....	400

Total amount to be appropriated under each head of appropriation 59,650

Amount appropriated for current fiscal year ending June 30, 1915..... 58,650

¹ Attention is invited to the fact that the additional clerk recommended is not an increase in the bureau's present force, as this clerk is now employed in the Bureau of Construction and Repair, but carried on the Bureau of Equipment rolls, and owing to the abolishment of the Bureau of Equipment, per naval act of June 30, 1914, it is necessary to have this employee appropriated for under the Bureau of Construction and Repair, as hereafter there will be no appropriations under the Bureau of Equipment.

Statement of persons employed as draftsmen and for other technical purposes, and the compensation paid to each as required by the legislative, executive, and judicial act of Mar. 4, 1913.

	Per diem.	Per annum.	Total.
1 chief draftsman.....	\$12.00	\$3,756.00	\$3,756.00
1 leading draftsman.....	10.00	3,130.00	3,130.00
1 leading draftsman.....	8.48	2,654.24	2,654.24
1 electrical expert aid.....	7.76	2,428.88	2,428.88
1 leading draftsman.....	7.52	2,353.76	2,353.76
1 leading draftsman.....	7.20	2,253.60	2,253.60
4 leading draftsmen, each.....	7.04	2,203.52	8,814.08
2 draftsmen, each.....	6.80	2,128.40	4,256.80
4 draftsmen, each.....	6.48	2,028.24	8,112.96
7 draftsmen, each.....	6.00	1,878.00	13,146.00
1 assistant electrical expert aid.....	5.76	1,802.88	1,802.88
3 draftsmen, each.....	5.76	1,802.88	5,408.64
3 draftsmen, each.....	5.52	1,727.76	5,183.28
1 draftsman.....	5.36	1,677.68	1,677.68
4 draftsmen, each.....	5.04	1,577.52	6,310.08
3 draftsmen, each.....	4.80	1,502.40	4,507.20
2 draftsmen, each.....	4.48	1,402.24	2,804.48
2 draftsmen, each.....	4.00	1,252.00	2,504.00
2 assistant draftsmen, each.....	3.60	1,126.80	2,253.60
2 assistant draftsmen, each.....	2.80	876.40	1,752.80
1 assistant draftsman.....	2.40	751.20	751.20
Total.....			85,862.16

ESTIMATE B.—Construction and repair of vessels.

Detailed objects of expenditures and explanations:

For preservation and completion of vessels on the stocks and in ordinary; purchase of materials and stores of all kinds; steam steerers, pneumatic steerers, steam capstans, steam windlasses, air craft, and all other auxiliaries; labor in navy yards and on foreign stations; purchase of machinery and tools for use in shops; carrying on work of experimental model tank; designing naval vessels; construction and repair of yard craft, lighters, and barges; wear, tear, and repair of vessels afloat; general care, increase, and protection of the Navy in the line of construction and repair; incidental expenses for vessels and navy yards, inspectors' offices, such as photographing, books, professional magazines, plans, stationery, and instruments for drafting room, and for pay of classified force under the bureau; for hemp, wire, iron, and other materials for the manufacture of cordage, anchors, cables, galleys, and chains; specifications for purchase thereof shall be so prepared as shall give fair and free competition; canvas for the manufacture of sails, awnings, hammocks, and other work; interior appliances and tools for manufacturing purposes in navy yards and naval stations; and for the purchase of all other articles of equipage at home and abroad; and for the payment of labor in equipping vessels therewith and manufacture of such articles in the several navy yards; naval signals and apparatus, other than electric, namely, signals, lights, lanterns, rockets, running lights, lanterns and lamps and their appendages for general use on board ship for illuminating purposes, and oil and candles used in connection therewith; bunting and other materials for making and repairing flags of all kinds; for all permanent galley fittings and equipage; rugs, carpets, curtains, and hangings on board naval vessels—

Estimated amount required for each detailed object..... \$9,177,127

Total amount to be appropriated under each head of appropriation..... 9,177,127

Amount appropriated for current fiscal year ending June 30, 1915..... 9,788,000

Provided, That no part of this sum shall be applied to the repair of any wooden ship when the estimated cost of such repairs, to be appraised by a competent board of naval officers, shall exceed 10 per cent of the estimated cost, appraised in like manner, of a new ship of the same size and like material.

Provided further, That no part of this sum shall be applied to the repair of any other ship when the estimated cost of such repairs, to be appraised by a competent board of naval officers, shall exceed 20 per cent of the estimated cost, appraised in like manner, of a new ship of the same size and like material.

Provided further, That nothing herein contained shall deprive the Secretary of the Navy of the authority to order repairs of ships damaged in foreign waters or on the high seas, so far as may be necessary to bring them home.

Improvement of construction plants.

Detailed objects of expenditures and explanations.	Estimated amount required for each detailed object.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for current fiscal year ending June 30, 1915.
For repairs and improvements of plants at navy yards:			
Portsmouth, N. H.	\$10,000	\$10,000	\$10,000
Boston, Mass.	10,000	10,000	10,000
New York, N. Y.	20,000	20,000	20,000
Philadelphia, Pa.	15,000	15,000	15,000
Norfolk, Va.	15,000	15,000	15,000
Charleston, S. C.	15,000	15,000	15,000
Mare Island, Cal.	15,000	15,000	15,000
Puget Sound, Wash.	10,000	10,000	10,000
Total.	110,000	110,000	110,000

ESTIMATE C.—Increase of the Navy, construction and machinery; and increase of the Navy, torpedo boats.

Detailed objects of expenditures and explanations.	Estimated amount required for each detailed object.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for current fiscal year ending June 30, 1915.
Increase of the Navy:			
Construction and machinery (on account of hulls and outfits of vessels heretofore authorized) to be available until expended.	\$13,464,459	\$13,464,459	\$19,647,617
Torpedo boats (on account of submarine torpedo boats heretofore authorized), to be available until expended.	1,341,344	1,341,344	3,510,617
Total.	14,805,803	14,805,803	23,158,234

NOTE.—The above does not include any money for new ships which may be authorized at the next session of Congress.

WASHINGTON, D. C., August 27, 1914.

From: Bureaus of Construction and Repair and Steam Engineering.

To: Navy Department.

1. In compliance with instructions contained in the Department's letter of May 1, 1914, the bureaus submit herewith preliminary joint estimates (per estimate sheet "C," inclosure A) under appropriations "Increase of the Navy, construction and machinery" and "Increase of the Navy, torpedo boats," for work on new vessels heretofore authorized by Congress:

*"Increase of the Navy, construction and machinery."***Estimated expenditures:****Under Bureau of Construction and Repair—**

Fiscal year 1915.	\$15,543,114	
Fiscal year 1916.	14,929,548	
		\$30,472,662

Under Bureau of Steam Engineering—

Fiscal year 1915.	7,247,014	
Fiscal year 1916.	7,605,400	
		14,852,414

Total estimated expenditures. 45,325,076

Amount available to pay on the above:

Balance July 1, 1914.	12,213,000	
Appropriated per naval act of June 30, 1914—		
Old program.	\$11,387,617	
New program.	8,260,000	
		19,647,617
		31,860,617

Appropriation required for fiscal year 1916. 13,464,459

"Increase of the Navy, torpedo boats."

Estimated expenditures:

Under Bureau of Construction and Repair—

Fiscal year 1915.....	\$3,037,990	
Fiscal year 1916.....	2,336,151	
		\$5,374,141

Under Bureau of Steam Engineering—

Fiscal year 1915.....	1,513,320	
Fiscal year 1916.....	1,955,000	
		3,468,320

Total estimated expenditures..... 8,842,461

Amount available to pay on the above:

Balance July 1, 1914..... 3,690,500

Appropriated per naval act of June 30, 1914—

Old program.....	\$1,685,617	
New program.....	1,825,000	
		3,510,617

Appropriation made in naval act of Mar. 4, 1913, for wrecking pontoon and made available in naval act of June 30, 1914, for the construction of submarines authorized by the latter act..... 300,000

7,501,117

Appropriation required for fiscal year 1916..... " 1,341,344

2. Attention is invited to the fact that the above estimates do not include any money for the first year's work on new ships that may be authorized at the next regular session of Congress, as no information has been received as to the number, type, and character of new vessels for the building program for the fiscal year 1916.

3. In view of the fact that the Bureau of Equipment has been abolished, per naval act of June 30, 1914, it is recommended that no further amounts be appropriated under "Increase of the Navy, equipment," and that the following provision be inserted under the heading "Increase of the Navy, equipment," in the naval act making appropriations for the fiscal year ending June 30, 1916:

"The unexpended balance on June 30, 1915, shall be transferred to appropriation 'Increase of the Navy, construction and machinery,' and beginning with July 1, 1915, equipment outfits shall be charged to appropriation 'Increase of the Navy, construction and machinery.'"

R. M. WATT.
R. S. GRIFFIN.

SHIPBUILDING WORK AT NAVY YARDS.

In the last annual report the bureau stated—

There is now a greater value of new shipbuilding work in progress and authorized at navy yards than ever before in the history of the new Navy. It includes the battleship *New York*, also battleship 39 (no name assigned as yet) at the navy yard, New York; and the river gunboats *Monocacy* and *Palos*, also the fuel ships *Kanawha* and *Maumee* at the navy yard, Mare Island. For 18 months, at least, the navy yards at New York and Mare Island—the only yards equipped for expeditious and economical shipbuilding—will be taxed to their maximum capacity in shipbuilding, unless their facilities are increased.

During the past year the Secretary of the Navy authorized new construction work at navy yards which hitherto have not been so engaged. It is therefore pertinent to repeat the statement of one year ago to the effect that there is now a greater value of new shipbuilding work in progress and authorized at navy yards, and a larger number of navy yards so employed in new construction than ever before in the history of the new Navy. It includes the battleship *Arizona*, and will include also one battleship of the *California* class; the fuel ships *Kanawha* and *Maumee*; submarine *L-8*; transport *No. 1*; and supply ship *No. 1*. Full particulars regarding the new work

at navy yards during the past year, and the new work authorized are as follows:

Battleship "New York."—The U. S. S. *New York* was completed at the New York Navy Yard, and commissioned April 15, 1914. She left the navy yard on April 26, 1914, and served as flagship of the Special Service Squadron until the squadron was disbanded. Her construction in a navy yard was authorized by the naval appropriation act approved June 24, 1910, and the Secretary of the Navy designated the navy yard, New York, as the place of building.

When estimates of the cost of construction of this battleship were received in the department, it was found that they exceeded the limit of cost imposed by Congress in the naval appropriation act, and in accordance with an opinion of the Attorney General, the Secretary of the Navy suspended all work on the vessel. The Secretary of the Navy reported the fact to Congress and the naval appropriation act of March 4, 1911, contained the following provision:

* * * and the limit of cost, exclusive of armor and armament, of the battleship authorized and directed by the naval appropriation act approved June 24, 1910, to be constructed in one of the navy yards, is hereby increased to \$6,400,000, exclusive of indirect charges.

Upon the passage of the act the work of preparation for building the vessel was immediately resumed.

The naval appropriation act of March 4, 1911, contained also the following provision:

Provided, That no part of any sum herein appropriated shall be expended for the purchase of structural steel, ship plates, armor, armament, or machinery from any persons, firms, or corporations, who have combined or conspired to monopolize the interstate or foreign commerce or trade of the United States, or the commerce or trade between the States and any Territory or the District of Columbia in any of the articles aforesaid, and no purchase of structural steel, ship plates, or machinery shall be made at a price in excess of a reasonable profit above the actual cost of manufacture.

and the placing of contracts for the material of the *New York* was again delayed pending an opinion by the Attorney General as to the steps necessary to insure compliance with the above provision. The necessary procedure having been determined, contracts for material were placed. By decision of the department the constructional period of 36 months is considered as beginning May 1, 1911.

The keel of this vessel was laid September 11, 1911; she was launched October 30, 1912, commissioned April 15, 1914, and left the navy yard on April 26, 1914, ready for service. She was fully completed within the 36 months constructional period set by the department. The actual cost of construction was materially less than the estimated cost, and the bureau considers the performance of the New York Navy Yard, both as regards time and cost of construction, as excellent.

Battleship "Arizona."—The construction of this vessel is now in progress at the navy yard, New York, N. Y. Her construction was authorized in the naval appropriation act approved March 4, 1913, as follows:

* * * That for the purpose of further increasing the Naval Establishment of the United States the President is hereby authorized to have constructed one first-class battleship, carrying as heavy armor and as powerful armament as any vessel of its class, to have the highest practicable speed and greatest desirable radius of action, and to cost, exclusive of armor and armament, not to exceed \$7,425,000: *Provided*, That the battleship herein authorized shall be built in a Government navy yard.

After consideration of estimates for the construction of this vessel, the department designated the above yard as the place of building. The commandant of that yard accordingly was directed to proceed with the construction of the vessel on June 19, 1913.

By decision of the department the constructional period of 36 months is considered as beginning September 15, 1913, the date of award of contract for the main structural material for the vessel.

The keel of the *Arizona* was laid March 16, 1914; on October 1, 1914, her hull was reported as 33.6 per cent and her machinery as 16.1 per cent completed. Her progress is such as to indicate her completion within the constructional period.

One battleship of "California" class.—The naval appropriation act approved June 30, 1914, reads as follows:

That for the purpose of further increasing the Naval Establishment of the United States the President is hereby authorized to have constructed two first-class battleships carrying as heavy armor and as powerful armament as any vessel of their class, to have the highest practicable speed and greatest desirable radius of action, and to cost, exclusive of armor and armament, not to exceed \$7,800,000 each. One of the battleships hereby authorized shall be built and constructed at a Government navy yard.

The plans and specifications for the *California* class of battleships were issued to the navy yard, New York, and to private shipbuilders August 1, 1914. The bids were opened at the Navy Department October 6, 1914, and it is anticipated that the order will be given to the navy yard during the month of October to proceed with the construction of the vessel required by the act to be constructed in a Government navy yard.

River gunboat "Monocacy."—The U. S. S. *Monocacy* was authorized by act of Congress of March 4, 1911. Bids were invited for her construction, in the usual manner, and four navy yards were asked to submit estimates. Only one bid was received from a private shipbuilding company and that practically at the limit of cost imposed by Congress. As the estimates received from navy yards were materially less than the one bid received, the Bureau of Construction and Repair and the Bureau of Steam Engineering jointly recommended to the Department that the construction be undertaken at Mare Island Navy Yard. The Secretary of the Navy ordered Mare Island to proceed with the construction of this vessel on August 13, 1912.

Owing to the difficulty experienced in the delivery of "bullet-proof steel," the progress on the gunboat was not as rapid as was anticipated. Her keel was laid April 28, 1913. On November 20, 1913, packing for shipment was completed. Contract was made with the Shanghai Dock & Engineering Co. for the reerection of this vessel at Shanghai, China. The material of this vessel and stores were shipped by the steamship *Mongolia* and arrived off Woosung, China, January 13, 1914, from whence it was lightered to the shipyard. On February 27, 1914, the keel of the *Monocacy* was relaid at Shanghai, China. The *Monocacy* was launched April 27, 1914. She was gotten under way May 29, 1914, for trials, which were satisfactory, and was commissioned for service June 24, 1914. The total cost of this vessel built at Mare Island Navy Yard, transported to Shanghai, and there reerected by contract, was only two-thirds of the only bid received from a private shipbuilder f. o. b. shipyard above referred to.

River gunboat "Palos."—The naval appropriation act of August 22, 1912, made available for the construction of a river gunboat the

appropriation contained in the act of May 4, 1898, for one gunboat to be built on the Great Lakes.

In view of the department's experience in obtaining bids for the construction of the *Monocacy*, the improbability of obtaining bids at the time to the advantage of the Government, the existing demands for river gunboats on the China station, and the time saved in starting the work, the department on August 23, 1912, ordered that this vessel be constructed at the navy yard, Mare Island, simultaneously with the building of the *Monocacy*.

Owing to the difficulty experienced in the delivery of "bullet-proof steel," the progress on the gunboat was not as rapid as was anticipated. Her keel was laid April 28, 1913. On October 30, 1913, packing for shipment was completed. Contract was made with the Shanghai Dock & Engineering Co. for reerection at Shanghai, China, and shipment was made by the steamship *Mongolia*, arriving off Woosung, China, January 13, 1914. The material was lightered to the shipyard, and on February 16, 1914, the keel of the *Palos* was relaid at Shanghai, China. The vessel was launched April 23, 1914. The *Palos* was gotten under way May 27, 1914, for trials, and the work was reported as satisfactory. The total cost of this vessel built at Mare Island Navy Yard, transported to Shanghai and there reerected by contract, was only two-thirds of the bid received from one private shipbuilder f. o. b. shipyard for the *Monocacy*.

Fuel ships "Kanawha" and "Maumee."—These vessels are now under construction at the navy yard, Mare Island, Cal. Their construction was authorized by the naval appropriation act for the fiscal year ending June 30, 1913, and approved August 22, 1912, as follows:

Two fuel ships, to cost, exclusive of armor and armament, not to exceed \$1,140,000 each and which shall be built in navy yards, one to be built in a navy yard on the Pacific coast.

Pursuant to this authorization, plans and specifications for these vessels were prepared by this bureau and the Bureau of Steam Engineering. Preliminary estimates for the construction of one of these vessels were obtained, after consideration of which the Navy Department approved the recommendation of the bureaus that one vessel be built at the navy yard, Mare Island, and that decision as to the place of building the second vessel be deferred pending the receipt of additional estimates. On January 23, 1913, the commandant of that yard was accordingly instructed to proceed with the construction of the *Kanawha*.

The naval appropriation act for the fiscal year ending June 30, 1914, and approved March 4, 1913, contained under the heading "Bureau of Steam Engineering" the following authorization:

* * * That the unobligated balances under the appropriation "Steam machinery" for the fiscal years ending June 30, 1912, and June 30, 1913, not exceeding \$250,000, are hereby reappropriated and made available for the development of a type of heavy-oil engine suitable for use in one of the fuel ships authorized by the act approved August 22, 1912, and the expenditure thus incurred shall not be a charge against the limit of cost of such vessel.

The Navy Department approved the recommendations of this bureau and the Bureau of Steam Engineering, made after careful consideration of all the estimates received from various navy yards, that the *Maumee* be built at the navy yard, Mare Island, and that the machinery of heavy-oil type be built at the navy yard, New York,

and subsequently be shipped to Mare Island for installation on the vessel. This course permitted the preparation of plans, ordering and assembling of material for both vessels to be proceeded with simultaneously with considerable consequent economy. The commandant of the Mare Island Navy Yard was accordingly directed to proceed with the construction of the *Maumee*, except main propelling machinery, on March 24, 1913.

The estimated time for the construction of these vessels is for the *Kanawha* 22 months and for the *Maumee*, in so far as the hull is concerned, 27 months, both dates to begin with the delivery of material. On October 1, 1913, the navy yard reported that the first shipment of structural material was received during the month of September.

The keel of the *Kanawha* was laid December 8, 1913; she was launched July 11, 1914; on October 1, 1914, her hull was reported as 78.9 per cent and her machinery as 70.9 per cent completed.

Following the launch of the *Kanawha*, on July 23, 1914, the keel of the *Maumee* was laid on the same building slip from which the *Kanawha* had been launched. On October 1, 1914, the hull of the *Maumee* was reported as 48.8 per cent and her machinery as 31 per cent completed.

Transport "No. 1."—On February 19, 1914, the Secretary of the Navy directed that transport *No. 1*, authorized by the naval appropriation act of March 4, 1913, be built at the navy yard, Philadelphia. The naval appropriation act of June 30, 1914, contained an appropriation of \$200,000 for "building slip and equipment" for the navy yard, Philadelphia, Pa. Plans have been prepared by the Bureau of Yards and Docks, after conference with this bureau, for the building slip, and ground was broken for the new building ways September 21, 1914. Specifications for the crane equipment for the slip were prepared by this bureau and the Bureau of Yards and Docks, and bids for the same were opened October 3, 1914. The additional shop equipment necessary for this work is being installed, including a complete rearrangement of the shipfitters' shop. The contract for the hull material of this vessel was let on July 16, 1914.

Supply ship "No. 1."—On February 19, 1914, the Secretary of the Navy directed that supply ship *No. 1*, authorized by the naval appropriation act of March 4, 1913, be built at the navy yard, Boston. The naval appropriation act of June 30, 1914, made available an unexpended appropriation of \$148,000, for "building slip and equipment," for the navy yard, Boston, Mass. Plans have been prepared by the Bureau of Yards and Docks, after conference with this bureau, for the building slip, and bids for the construction of the slip will be opened about October 24. Specifications for the crane equipment for the slip were prepared by this bureau and the Bureau of Yards and Docks, and bids for the same were opened October 3, 1914. The contract for the hull material of this vessel was let on July 16, 1914, and the early stages of the work of construction are under way.

Submarine "L-8."—Having received from the Portsmouth Navy Yard a report describing the adaptability and facilities of that yard for the construction of a submarine under cover of the old "Franklin shiphouse," the Secretary of the Navy, on March 16, 1914, assigned the construction of submarine *L-8* to the navy yard, Portsmouth, N. H.

A contract was entered into June 29, 1914, with the Lake Torpedo Boat Co. for the necessary working plans and license for the Navy Department to build one submarine boat.

The mold loft work has been commenced, and contracts for structural material were placed October 3, 1914.

CONSTRUCTION CORPS INCREASE.

A large part of the increased supervisory work resulting from the department's well-defined policy of increasing the amount of new construction at navy yards has fallen upon the Construction Corps of the Navy. At private shipyards undertaking new construction for the Navy, naval officers are stationed to inspect the work turned out, and the shipbuilding companies have a large, skilled, highly paid technical force actively engaged in planning and superintending the work of construction. While the naval constructors on duty at navy yards, in addition to their routine duties of supervising repairs to naval vessels, can care for a certain amount of new construction, in the bureau's opinion it is necessary that yards building vessels as large as supply ship *No. 1* should have at least one and preferably two officers of the Construction Corps whose whole time can be given to supervising the details of the new construction. Unfortunately, with the limited number available in the Construction Corps, and the many other demands made for services of these officers, it is now impossible for the bureau to recommend to the department for detail at the navy yards the number of naval constructors which is considered desirable and which would be provided if there were sufficient officers available.

The limit of the Construction Corps was placed at 75 officers by the naval appropriation act of March 3, 1903, and the necessities for an increase in the corps of naval constructors have been repeatedly represented to the department by the Chief Constructor. In view of the additional supervision resulting from the increased amount of new construction work at navy yards, the bureau urges for favorable consideration of Congress at this time a limited increase in the number of officers of the Construction Corps. This will not entail any increased appropriation, as it will mean that a limited number of the graduates of the Naval Academy who otherwise would enter the line of the Navy would be assigned hereafter to the special technical work of the Corps of Naval Constructors.

Attention is invited also to the slow promotion in the Construction Corps at the present time. When the number of officers in the Construction Corps was fixed at 40, the number of naval constructors with the rank of captain and with the rank of commander was fixed at 5 in each of these grades. When the total number of officers in the Construction Corps was increased to 75, there was no change made in the number of officers allowed in these grades. At that time several officers in the Construction Corps held rank ahead of their line classmates, and an increase in the authorized number of captains and of commanders was not necessary. At present, however, conditions are such that 10 officers in the Construction Corps, graduates of seven classes of the Naval Academy, have less rank than their classmates in the line. For many years to come the number of constructors thus passed over by their classmates in the line will con-

tinue to increase. Had these officers remained in the line of the Navy they would now have the rank of their classmates, and it is only right and equitable that they should not suffer loss of rank and pay (since rank fixes pay) by reason of having selected the Construction Corps. Rank commensurate with length of service must be provided for officers of the Construction Corps if the general contentment and efficiency of this important branch of the commissioned personnel is to be maintained. It is therefore recommended that in connection with the increase in numbers of the Construction Corps there be authorized an increase in the number of captains to 12 and of commanders to 13, with the proviso that no officer of the Construction Corps is to be promoted to the grade of captain or of commander prior to the promotion to these grades of the line officer with whom or next after whom he takes precedence.

EXPERIMENTAL MODEL BASIN AND WIND TUNNEL.

The work of the model basin has been carried on as usual during the past year with great advantage to the bureau. A wind tunnel has been installed which is 8 feet square at the observing chamber and can be used up to an air velocity of 6,000 feet per minute. Preliminary tests and adjustments are about completed, and it is now ready for any experiments within its capacity. It has already been used for special investigations in connection with ventilator cowls with satisfactory results. A number of experiments with models of aeroplane wings and complete aeroplanes have been initiated and the bureau believes that as experimental data accumulates this wind tunnel will be found as useful in the development of air craft as the model basin has shown itself in connection with ships.

VESSELS SURVEYED.

The following vessels have been surveyed and repairs authorized during the past fiscal year:

Name.	Where surveyed.	Date of survey.	Estimated cost of repairs.
Albany.....	Puget Sound.....	Mar. 12, 1914	\$34,462.00
Alice.....	Norfolk.....	Jan. 12, 1914	3,256.00
B-2.....	do.....	July 3, 1913	2,961.16
Brooklyn.....	Philadelphia.....	Aug. 7, 1913	47,974.00
Brutus.....	Charleston, S. C.....	Sept. 2, 1913	13,131.22
Cheyenne.....	Puget Sound.....	Aug. —, 1913	18,962.67
Castine.....	Boston.....	Oct. —, 1913	26,539.00
Des Moines.....	Portsmouth, N. H.....	Sept. 8, 1913	4,016.00
Delaware.....	Norfolk.....	Feb. 4, 1914	35,557.00
Eagle.....	Portsmouth, N. H.....	Sept. 3, 1913	5,017.50
Georgia.....	Boston.....	July —, 1913	75,829.33
Hopkins.....	Mare Island.....	Dec. 9, 1913	1,625.00
Idaho.....	Philadelphia.....	Nov. 25, 1913	11,983.50
Isla de Luzon.....	New York.....	May 7, 1914	7,125.00
Kansas.....	Philadelphia.....	Dec. 1, 1913	12,351.80
Louisiana.....	Norfolk.....	Aug. 28, 1913	17,501.60
Do.....	do.....	Jan. 28, 1914	58,173.00
Lebanon.....	do.....	Apr. 28, 1914	4,022.00
Michigan.....	do.....	July 8, 1913	17,563.78
Do.....	Philadelphia.....	June —, 1914	17,845.00
Montana.....	Portsmouth, N. H.....	Aug. 19, 1913	6,081.72
Minnesota.....	Philadelphia.....	July 11, 1913	48,063.36
Montgomery.....	Portsmouth, N. H.....	Aug. 30, 1913	7,774.60
Milwaukee.....	Puget Sound.....	Aug. 27, 1913	5,171.94
Mare.....	Portsmouth, N. H.....	Sept. 3, 1913	3,734.00

Name.	Where surveyed.	Date of survey.	Estimated cost of repairs.
Machias.....	New York.....	May 4, 1914	\$2,745.50
North Dakota.....	do.....	Aug. 25, 1913	10,756.97
New Orleans.....	Puget Sound.....	do.....	6,222.50
Nanshan.....	Mare Island.....	Sept. 25, 1913	21,243.00
New Jersey.....	Boston.....	Oct. —, 1913	51,125.75
Neptune.....	Norfolk.....	Nov. 18, 1913	25,188.01
New Hampshire.....	do.....	May —, 1914	42,787.00
Nebraska.....	Boston.....	June —, 1914	46,282.61
Petrel.....	Portsmouth, N. H.....	Sept. 4, 1913	3,369.00
Paducah.....	do.....	Sept. 8, 1913	3,517.74
Rhode Island.....	Boston.....	Nov. —, 1913	43,425.53
South Carolina.....	Norfolk.....	Aug. 5, 1913	64,829.00
San Francisco.....	Portsmouth, N. H.....	Aug. 13, 1913	3,443.00
Tonopah.....	Norfolk.....	July 3, 1913	8,611.04
Tennessee.....	Portsmouth, N. H.....	Sept. 3, 1913	5,631.00
Do.....	do.....	Sept. 5, 1913	26,160.00
Uncas.....	Charleston, S. C.....	Sept. 3, 1913	7,480.17
Virginia.....	Boston.....	July 11, 1913	84,850.94
Vermont.....	Norfolk.....	Jan. 13, 1914	16,011.00
Do.....	do.....	May 4, 1914	23,585.72
Wyoming.....	New York.....	Oct. 16, 1913	60,051.00

TECHNICAL AND CLERICAL FORCE.

The bureau is pleased to state that its technical and clerical force has maintained its high standard of efficiency, though considerably hampered by its inability to obtain men with suitable experience to fill vacancies, due to economic and other conditions. Recent promotions, made possible by appropriations and resignations, have improved conditions, but it is believed that the rates of pay are not yet equal to those paid by commercial establishments for the same grades of ability.

The bureau is pleased to acknowledge the faithful and earnest efforts of its employees, who, when they considered it necessary, have voluntarily worked many hours overtime or relinquished portions of their well-earned leave.

INSPECTION OF MATERIAL.

The inspection work under this bureau has materially increased in the last year, without corresponding permanent increase in the classified force, and, in the bureau's opinion, without loss in the quality of inspection. In addition to the inspection of a greater amount of structural steel than has ever been handled in any previous year, the eastern district preliminarily inspected the major portion of the machines for the hull division shops at the naval station, Pearl Harbor; the total of the contracts was about \$200,000.

Illustrating the increased amount of inspection work accomplished in the different classes of material, the bureau gives the following table of amounts of steel inspection for the years 1911, 1912, 1913, and 1914, and the corresponding costs of clerks and inspectors, less travel expense. The total travel expense chargeable to appropriation "Pay, miscellaneous," has been computed for the year 1914, and inserted in the table. Attention is invited to the low total cost of the inspection of steel materials for the fiscal year of 1914, on a per-ton basis, namely, 42.7 cents.

Fiscal year.	Steel material inspected.	Cost of inspection chargeable to appropriation "Construction and repair" (salaries, etc.).	Travel expense chargeable to appropriation "Pay, miscellaneous."
	<i>Pounds.</i>		
1911.....	77,504,702	\$25,275.04	.....
1912.....	121,920,658	26,944.10	.....
1913.....	105,614,565	27,246.52	.....
1914.....	159,403,349	28,003.36	\$2,383.51

NOTE.—1914, cost of inspection, including salaries, travel expense, etc., per ton of steel material inspected, 42.7 cents.

It must be borne in mind that the steel inspection, particularly for the eastern district, is only a part of the total material inspected; for example, factory or mill inspection is also made on hose, copper materials, galley equipment, life jackets, belting, tubing, rubber materials, machinery, machine tools, toilet paper, toilet articles, chain, cork material, coaling baskets, wire mesh articles, storage batteries and electrical material, glass, shellac, brushes, paint, etc., wire and rope, pipe, metallic tubing, linoleum, and other miscellaneous supplies.

Mill inspection is particularly valuable to the bureau, not only in the assurance that the quality of material contracted for is actually obtained, but by the opportunity presented of having its inspectors at the large mills and places of manufacture constantly in touch with any improvements that are made in the quality of materials or in the various types and classes of machine tools, processes, etc., employed in production.

The bureau also desires to point out the increased competition in purchases under the bureau, due, first, to efforts of the inspectors and their assistants to interest reputable manufacturers who had not heretofore entered into contracts with the Navy Department; second, to obtaining by first-hand discussion the views and criticisms of the manufacturers relative to Navy specifications, and the resultant elimination of any unnecessary refinements present in the department's specifications.

The bureau also invites the department's attention to the very considerable saving in the expenditures by the Navy Department for material and transportation thereof, which has resulted from the inspection and acceptance of West coast shipments f. o. b. at mills in the East, particularly structural steel material in and around Pittsburgh and Philadelphia. Shipments are being made of this material on Government bills of lading and material reductions in the transportation costs are being obtained by shipment over land-grant railroads, these reductions in many cases amounting to as much as 50 and 100 per cent of the regular tariff. Competition among the railroads for the transportation of these materials has been secured, and when large quantities are to be transported, as, for example, structural steel material required for the *Kanawha* and *Maumee*, still lower rates are obtained by securing competitive bids from the various railroads. The burden of the correspondence, opening of bids, and award of contract has been handled for the Bureau of Supplies and Accounts by the inspectors under this bureau and their assistants, without increase in their force.

As an example of the saving to the department effected by this phase alone of mill inspection, the bureau invites attention to the purchase of steel material required for the construction of the *Kanawha* and *Maumee* at the Mare Island Navy Yard; about 15,000,000 pounds of structural steel were shipped from eastern mills to Mare Island, and the saving in the transportation cost by the use of land-grant railroads on these contracts alone was \$20,000. This, it will be noted, is about 67 per cent of the total amount of the salaries of the inspectors and clerks of the eastern and western districts, and their total traveling expense for the last fiscal year. As all West coast material is purchased f. o. b. mills whenever practicable, the saving to the Government throughout the year is obvious.

On account of the increase in pay granted a number of the inspectors and clerks of the inspection staff by the department in the fiscal years of 1914 and 1915, the condition of the bureau's inspection staff is better than it was, but a further reasonable increase in pay and an increase in their number is desirable to meet the increasing volume of business handled, to meet the increased cost of living, to reward merit and diligent services; to avoid the delays and interferences in inspections resulting from a shortage of inspectors, and to prevent highly trained and experienced men leaving the Government service on account of greater pecuniary reward offered by private employment. The bureau has been required during the last year to fill the place of the senior assistant inspector of hull material for the western district owing to the resignation of the then incumbent, a man of considerable experience and training in the inspection of steel material. This inspector accepted a more remunerative position with one of the steel companies.

The bureau feels that the very satisfactory showing made by its inspection force would not have been made had it not been for the faithful and earnest efforts of its employees, and for the many hours of voluntary overtime devoted to their work.

Summary of work performed by steel inspectors under the Bureau of Construction and Repair for the eastern and western districts during the fiscal year ended June 30, 1914.

	Eastern district.	Western district.	Total.
Total amount of material rolled and inspected.....pounds..	56,665,440	102,737,909	159,403,349
Amount rejected for physical tests.....do.....	5,571,656	5,351,853	10,923,509
Percentage rejected for physical tests.....	9.83	5.21	6.85
Amount rejected for chemical tests.....pounds..	543,659	25,160	568,819
Percentage rejected for chemical tests.....	.96	.02	.36
Amount rejected for surface defects.....pounds..	968,143	16,982,834	17,950,982
Percentage rejected for surface defects.....	1.71	16.53	11.27
Amount rejected for all causes.....pounds..	7,063,463	22,359,877	29,423,340
Percentage rejected for all causes.....	12.50	21.76	18.48
Scrap.....pounds..	15,463,827	9,297,230	24,761,057
Total amount of material accepted and shipped.....do.....	34,118,150	71,080,802	105,198,952

The following table shows the distribution of material among vessels building, etc.:

Detail statement of shipment of material from the eastern and western districts for the fiscal year ended June 30, 1914.

Name of vessel, etc.	Eastern district.	Western district.	Total.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Arizona.....		15,484,316	15,484,316
Arkansas.....	899		899
Bushnell.....	250	1,101	1,351
Cassin.....	775		775
Conyngham.....	87,728	653,386	741,064
Cummings.....	1,076		1,076
Cushing.....	70,767	113,685	184,442
Defiance.....		5,645	5,645
Downes.....	7,875	475	8,350
Ericsson.....	125,242	108,286	228,528
Fulton.....	11,507		11,507
Hercules.....		73,235	73,235
Jacob Jones.....	169,322	667,334	836,656
Kanawha.....	5,640,490	2,665,456	8,325,946
Maumee.....	5,690,404	2,598,441	8,288,845
McDougal.....	102,808	49,288	152,096
Melville.....	15,361	4,118	19,479
Nevada.....	1,167,821	3,514,660	4,682,511
New York.....	3,565	10,790	14,355
Nicholson.....	124,491	193,700	318,191
O'Brien.....	125,200	124,899	250,099
Oklahoma.....	894,866	5,340,127	6,234,993
Pennsylvania.....	885,201	24,952,026	25,837,227
Porter.....	87,427	649,380	736,807
Sacramento.....	175,882	165,782	341,664
Texas.....	16,021	66,641	82,662
Tucker.....	58,235	786,012	844,247
Virginia.....	4,937		4,937
Wadsworth.....	111,046	780,439	891,485
Wainwright.....	169,324	667,334	836,658
Winslow.....	121,023	145,882	266,905
Wyoming.....	452		452
G-3.....	2	777	779
G-4.....	221		221
K-1.....		4	4
K-2.....		4	4
K-3.....		4	4
K-4.....		4	4
L-1.....	60,567	164,456	225,023
L-2.....	59,469	164,456	223,925
L-3.....	58,663	164,456	223,119
L-4.....	59,452	164,456	223,908
L-5.....	433,522		433,522
L-6.....	474,111		474,111
L-7.....	382,180		382,180
L-9.....	342,579	113,472	456,051
L-10.....	342,517	113,472	455,989
M-1.....	76,004	321,622	397,626
Miscellaneous.....		2,947,395	2,947,395
Contracts and requisitions.....	15,958,878	7,108,816	23,067,694
Total.....	34,118,150	71,080,802	105,198,952

Orders for material requiring inspection were distributed among the following manufacturers:

EASTERN DISTRICT.

Acme Boiler & Iron Works.....	Philadelphia, Pa.
Adams & Westlake Co.....	Do.
Alteneider Sons.....	Do.
American Iron & Steel Manufacturing Co.....	Reading, Pa.
Do.....	Lebanon, Pa.
American Hard Rubber Co.....	Butler, N. J.
American Steel & Wire Co.....	Trenton, N. J.
American Steel Foundries Co.....	Chester, Pa.
American Paring Machine Co.....	Philadelphia, Pa.
American Wood Working Machine Co.....	Williamsport, Pa.

Armstrong Cork Co.....	Lancaster, Pa.
Do.....	Camden, N. J.
Ashman, S. A., & Sons.....	Philadelphia, Pa.
Armstrong Truck Co.....	North Wales, Pa.
Baldt Steel Co.....	New Castle, Del.
Baldt Anchor Co.....	Chester, Pa.
Baltimore Tube Co.....	Baltimore, Md.
Baltimore Copper Smelting & Refining Co.....	Do.
Banta Refrigerating Co.....	Clearfield, Pa.
Bayonne Nut & Bolt Co.....	Bayonne, N. J.
Belfield, N., Co.....	Philadelphia, Pa.
Bernstein Manufacturing Co.....	Do.
Bradlee & Co.....	Do.
Bethlehem Steel Co.....	South Bethlehem, Pa.
Brylgon Steel Casting Co.....	New Castle, Del.
Camden Iron Works.....	Camden, N. J.
Camden Copper Works.....	Do.
Cattie Bros. Co.....	Philadelphia, Pa.
Carpenter Steel Co.....	Reading, Pa.
Central Iron & Steel Co.....	Harrisburg, Pa.
Clad, V., & Sons.....	Philadelphia, Pa.
Coatesville Boiler Works.....	Coatesville, Pa.
Columbia Manufacturing Co.....	Columbia, Pa.
Cramp, Wm. & Sons, Ship & Engine Building Co.....	Philadelphia, Pa.
Crucible Steel Co.....	Harrison, N. J.
Darby, Edward, & Sons Co.....	Philadelphia, Pa.
Deemer Steel Casting Co.....	New Castle, Del.
Delaware Marine Supply Manufacturing Co.....	Wilmington, Del.
Delvin, Thomas, Manufacturing Co.....	Burlington, N. J.
Dey, E. T. B.....	North East, Md.
Donnelly, J. R., & Co.....	Brooklyn, N. Y.
Duryea Manufacturing Co.....	Jersey City, N. J.
Earle Gear & Machinery Co.....	Philadelphia, Pa.
Eastern Malleable Iron Co.....	Wilmington, Del.
Eastern Steel Co.....	Pottsville, Pa.
Edro Richardson Brass Co.....	Baltimore, Md.
Egan-Rogers Steel & Iron Co.....	Crum Lynne, Pa.
Electric Launch Co.....	Bayonne, N. J.
Electric Storage Battery Co.....	Philadelphia, Pa.
Empire Rubber & Tire Co.....	Trenton, N. J.
Empire Galvanizing Co.....	Philadelphia, Pa.
Enterprise Manufacturing Co.....	Do.
Ernst-Weimer Co.....	Easton, Pa.
Eureka Fire Hose Manufacturing Co.....	Jersey City, N. J.
Federal Steel Foundry Co.....	Chester, Pa.
Fitler, E. H., Co.....	Philadelphia, Pa.
Foster Engineering Co.....	Newark, N. J.
Ghenrich, Herman.....	Brooklyn, N. Y.
Goodyear Rubber Hose & Packing Co.....	Philadelphia, Pa.
Graphite Lubricating Co.....	Bound Brook, N. J.
Gutta-Percha & Rubber Manufacturing Co.....	Brooklyn, N. Y.
Hanson & Van Winkle.....	Newark, N. J.
Hazard Manufacturing Co.....	Wilkes-Barre, Pa.
Harrington, Edward, & Sons Co.....	Philadelphia, Pa.
Hellar Bros. Co.....	Newark, N. J.
Hendricks Bros.....	Soho, N. J.
Hees Bright Co.....	Philadelphia, Pa.
Hindley Gear Co.....	Do.
Hillis & Jones Co.....	Wilmington, Del.
Harrisburg Pipe & Pipe Bending Co.....	Harrisburg, Pa.
Hoopes & Townsend Co.....	Philadelphia, Pa.
Insinger Co.....	Do.
Jenkins Manufacturing Co.....	Bloomfield, N. J.
Jersey City Galvanizing Co.....	Jersey City, N. J.
Johns-Manville Co.....	Claremont, N. J.
Kahnweiler, David, & Sons.....	New York City, N. Y.
Keystone Casting Co.....	Chester, Pa.
Keystone Steel Co.....	Pine Forge, Pa.

Lebanon Chain Works.....	Lebanon, Pa.
Lukens Iron & Steel Co.....	Coatesville, Pa.
Manhattan Rubber Manufacturing Co.....	Passaic, N. J.
McArdle & Cooney.....	Philadelphia, Pa.
McCambridge, Cooper Co.....	Do.
McCullough Iron Co.....	Wilmington, Del.
Midvale Steel Co.....	Philadelphia, Pa.
Modoc Co.....	Fernwood, Pa.
Morris Machine Works.....	Baldwinsville, N. Y.
New Process Steel Co.....	Lancaster, Pa.
New York Belting & Packing Co.....	Passaic, N. J.
Nicetown Plate Washer Co.....	Philadelphia, Pa.
Niles-Bement-Pond Co.....	Do.
North American Smelting Co.....	Do.
Ober Co.....	Do.
Ohl, George A.....	Newark, N. J.
Pennsylvania Steel Co.....	Steelton, Pa.
Pennsylvania Flexible Metallic Tube Co.....	Philadelphia, Pa.
Pennsylvania Forge Co.....	Bridesburg, Pa.
Penn Steel Casting & Machine Co.....	Chester, Pa.
Penn Metal Ceiling Co.....	Philadelphia, Pa.
Philadelphia Steel & Forge Co.....	Tacony, Pa.
Philadelphia Gear Works.....	Philadelphia, Pa.
Phosphor Bronze Smelting Co.....	Do.
Pencoyd Iron Works.....	Do.
Phoenix Iron Co.....	Phoenixville, Pa.
Poole Engineering & Machine Co.....	Baltimore, Md.
Power, L., Co.....	Philadelphia, Pa.
Potts, Horace T.....	Do.
Peerless Rubber Manufacturing Co.....	New Durham, N. J.
Railway Steel Spring Co.....	Philadelphia, Pa.
Reading Iron Co.....	Danville, Pa.
Reading Steel Casting Co.....	Reading, Pa.
Rennous-Kleinle Co.....	Baltimore, Md.
Riverside Metal Co.....	Riverside, N. J.
Roebing, John A., Sons Co.....	Trenton, N. J.
Rogers-Pyatt Shellac Co.....	Philadelphia, Pa.
Roovers Bros.....	Brooklyn, N. Y.
Sands, A. B., & Co.....	Bloomfield, N. J.
Singer Sewing Machine Co.....	Elizabethport, N. J.
Schoen, Jackson Co.....	Moylan, Pa.
Smith, H. B., Machine Co.....	Smithville, N. J.
Scott Paper Co.....	Philadelphia, Pa.
Standard Chain Co.....	York, Pa.
Standard Roller Bearing Co.....	Philadelphia, Pa.
Strawbridge & Clothier.....	Do.
Tabor Manufacturing Co.....	Do.
Thatcher Furnace Co.....	Newark, N. J.
Tindell-Morris Co.....	Eddystone, Pa.
United Cork Co.....	Lyndhurst, N. J.
United Lead Co.....	Perth Amboy, N. J.
Waterbury Co.....	Brooklyn, N. Y.
Webb, Elisha, & Co.....	Philadelphia, Pa.
Westmoreland Chemical & Color Co.....	Do.
Wilfong Iron Works.....	Do.
Williams, E. A., & Sons, Co.....	Jersey City, N. J.
Worth Bros. Co.....	Coatesville, Pa.
Wood, Allan, Iron & Steel Co.....	Conshohocken, Pa.
Do.....	Ivy Rock, Pa.
Woodhouse Chain Co.....	Trenton, N. J.

WESTERN DISTRICT.

Ajax Manufacturing Co.....	Cleveland, Ohio.
Allis-Chalmers Manufacturing Co.....	Norwood, Ohio.
American Rolling Mill Co.....	Middletown, Ohio.
American Sheet & Tinplate Co.: Bridgeport Works.....	Bridgeport, Ohio.
Vandergrift Works.....	Vandergrift, Pa.

American Spiral Spring Co.....	Pittsburgh, Pa.
American Sterilizer Co.....	Erie, Pa.
Armstrong Cork Co.....	Pittsburgh, Pa.
Cambria Steel Co.....	Johnstown, Pa.
Carbon Steel Co.....	Pittsburgh, Pa.
Carnegie Steel Co.:	
Clairton Works.....	Clairton, Pa.
Clark Works.....	Pittsburgh, Pa.
Duquesne Works.....	Duquesne, Pa.
Homestead Works.....	Munhall, Pa.
Lower Union Mills.....	Pittsburgh, Pa.
Upper Union Mills.....	Do.
Painter Mills.....	Do.
Valley Mills.....	Youngstown, Ohio.
Carter Iron Co.....	Hays, Pa.
Champion Rivet Co.....	Cleveland, Ohio.
Chisholm & Moore Manufacturing Co.....	Do.
Cleveland Punch & Shear Works.....	Do.
Crucible Steel Co. of America:	
Park Works.....	Pittsburgh, Pa.
Crescent Works.....	Do.
Singer-Nimick Works.....	Do.
Deforest Sheet & Tinplate Co.....	Niles, Ohio.
Diamond Felt & Manufacturing Co.....	Sharpsburg, Pa.
Eastern Lumber Co.....	Tonawanda, N. Y.
Elias Bro., G.....	Buffalo, N. Y.
Erie Forge Co.....	Erie, Pa.
Fay & Egan Co., J. A.....	Cincinnati, Ohio.
Fisher & Wilson Co.....	Cleveland, Ohio.
Garland Nut & Rivet Co.....	West Pittsburgh, Pa.
Goodrich Co., B. F.....	Akron, Ohio.
Goodyear Tire & Rubber Co.....	Do.
Hanlon-Gregory Galvanizing Co.....	Pittsburgh, Pa.
Hubbard & Co.....	Do.
Jones & Laughlin Steel Co.:	
Soho Works.....	Do.
South Side Works.....	Do.
LaBelle Iron Works.....	Steubenville, Ohio.
Long & Allstatter Co.....	Cincinnati, Ohio.
Lunkenheimer Co.....	Do.
McLean Bros.....	North Tonawanda, N. Y.
National Tube Co.:	
Christy Park Works.....	Christy Park, Pa.
McKeesport Works.....	McKeesport, Pa.
Standard Works.....	Ellwood City, Pa.
Versailles Works.....	Versailles, Pa.
Pittsburgh Forge & Iron Co.....	Pittsburgh, Pa.
Pittsburgh Galvanizing Co.....	Do.
Pittsburgh Rivet Co.....	Do.
Pittsburgh Screw & Bolt Co.....	Do.
Pittsburgh Steel Products Co.....	Monessen, Pa.
Pollak Steel Co.....	Cincinnati, Ohio.
Powell Co., William.....	Cincinnati, Ohio.
Reliance Electric & Engineering Co.....	Cleveland, Ohio.
Republic Iron & Steel Co.....	Youngstown, Ohio.
Ridgway Machine Co.....	Ridgway, Pa.
Spang-Chalfant Co.....	Sharpsburg, Pa.
Standard Chain Co.....	Braddock, Pa.
Stark Rolling Mill Co.....	Canton, Ohio.
Triumph Electric Co.....	Cleveland, Ohio.
Union Spring & Manufacturing Co.....	New Kensington, Pa.
United Engineering & Foundry Co.....	Pittsburgh, Pa.
Vandusen Co., E. W.....	Cincinnati, Ohio.
Westinghouse Electric & Manufacturing Co.....	East Pittsburgh, Pa.
Wheeling Mold & Foundry Co.....	Wheeling, W. Va.
Wolfe Brush Co.....	Pittsburgh, Pa.
Youngstown Sheet & Tube Co.....	Youngstown, Ohio.

The following is a list of the officers and inspectors engaged upon the inspection of material under this bureau:

EASTERN DISTRICT.

[Headquarters: Post Office Building, Philadelphia, Pa.]

Naval Constructor J. A. Furer, United States Navy, inspector in charge until December 24, 1913.

Assistant Naval Constructor E. G. Kintner, United States Navy, inspector in charge from December 24, 1913, until January 20, 1914.

Naval Constructor H. T. Wright, United States Navy, inspector in charge from January 20, 1914.

Assistant inspectors: J. B. Fry, J. T. Callaghan, jr., I. F. De Lany, J. E. Rettig, E. P. Hodgson, W. W. E. Ash.

Clerk: Thos. F. Maccabe.

WESTERN DISTRICT.

[Headquarters: Homestead Steel Works, Munhall, Pa.]

Assistant Naval Constructor C. A. Harrington, United States Navy, inspector in charge until August 22, 1913.

Naval Constructor R. P. Schlabach, United States Navy, inspector in charge from August 22, 1913.

Assistant inspectors: A. P. Harclerode, W. B. Canfield, J. A. O'Brien, W. H. Caldwell, H. M. Johnston, W. B. Petch, W. S. Davis, W. H. Wills, H. E. Hahn, J. C. Wickerham (resigned Feb. 19, 1914), J. K. Dungan (appointed temporarily from Dec. 5, 1913, to Mar. 4, 1914, and reappointed temporarily from Mar. 17, 1914, to June 30, 1914).

Stenographer and typewriter (clerk): C. J. Kortz.

INSPECTION OF ELECTRICAL MATERIAL.

The inspection of electrical material under the bureau at the works of the General Electric Co., Schenectady, N. Y.

Naval Constructor F. B. Zahm, United States Navy, retired, inspector in charge until March 27, 1914.

Assistant Naval Constructor H. G. Knox, United States Navy, inspector in charge from March 27, 1914.

Assistant inspector of electrical material: E. R. Fellow, second-class electrical expert aid (ship) from July 1, 1913.

LIST OF VESSELS OF THE UNITED STATES NAVY.

The list of vessels heretofore published as a part of this report has been omitted. This information is now published by the department in a special pamphlet, "Ships' Data, United States Naval Vessels."

ADDITIONS TO THE NAVY SINCE JUNE 30, 1913.

The additions to the effective force of the Navy by the completion of vessels building under contract and at navy yards are as follows: Battleships *Texas*, *New York*; torpedo-boat destroyers *Cassin*, *Duncan*, *Cummings*, *Aylwin*, *Benham*, *Parker*, *Balch*, *McDougal*; submarine torpedo boats *H-1*, *H-2*, *H-3*, *K-1*, *K-2*, *K-5*, *K-6*; *G-4*,¹ fuel ships *Proteus*, *Nereus*; gunboats *Monocacy*, *Palos*, *Sacramento*.

¹ Conditionally delivered.

TRIAL AND ACCEPTANCE DATA.

Statement of data relative to trials of vessels which have been preliminarily but not finally accepted since June 30, 1913.

Name.	Type.	Date of trial.	Speed required by contract.	Speed obtained on trial.	Date of preliminary acceptance.	By whom built.
Texas.....	Battleship....	Oct. 28, 1913	<i>Knots.</i> 21.0	<i>Knots.</i> 21.05	Mar. 12, 1914	Newport News Shipbuilding Co.
New York.....	do.....	.....	21.0	.....	Apr. 15, 1914	Government.
Sacramento.....	Gunboat.....	Mar. 31, 1914	12.5	12.78	Apr. 26, 1914	Wm. Cramp & Sons.
Monocacy.....	do.....	.....	13.25	.....	June 24, 1914	Government.
Palos.....	do.....	.....	13.25	.....	do.....	Do.
Duncan.....	Destroyer.....	July 5, 1913	29.0	29.14	Aug. 30, 1913	Fore River Shipbuilding Co.
Aylwin.....	do.....	Oct. 16, 1913	29.5	29.60	Jan. 17, 1914	Wm. Cramp & Sons.
Parker.....	do.....	Nov. 19, 1913	29.5	29.55	Dec. 29, 1913	Do.
Benham.....	do.....	Dec. 17, 1913	29.5	29.59	Jan. 20, 1914	Do.
Balch.....	do.....	Feb. 26, 1914	29.5	29.62	Mar. 26, 1914	Do.
McDougal.....	do.....	May 14, 1914	29.0	30.70	June 16, 1914	Bath Iron Works.
H-1.....	Submarine.....	Aug. 11, 1913	.....	.....	Nov. 29, 1913	Union Iron Works.
.....	.....	Sept. 16, 1913	.....	.....	.....	.....
H-2.....	do.....	Aug. 13, 1913	.....	.....	.....	Do.
.....	.....	Sept. 17, 1913	.....	.....	do.....	.....
H-3.....	do.....	Oct. 24, 1913	.....	.....	.....	.....
.....	.....	Nov. 18, 1913	.....	.....	Jan. 16, 1914	The Moran Co.
K-1.....	do.....	Dec. 1, 1913	.....	.....	Mar. 17, 1914	Fore River Shipbuilding Co.
.....	.....	Dec. 10, 1913	.....	.....	.....	Do.
K-2.....	do.....	Dec. 2, 1913	.....	.....	Jan. 30, 1914	Do.
.....	.....	Dec. 6, 1913	.....	.....	.....	.....
K-5.....	do.....	May 27, 1914	.....	.....	Aug. 20, 1914	Do.
.....	.....	June 6, 1914	.....	.....	Sept. 10, 1913	Newport News Shipbuilding Co.
Nereus.....	Fuel ship.....	Sept. 3-4, 1913	14.0	14.58	.....	.....

¹ Date of commission.

Statement of data relative to trials of vessels which have been finally accepted since June 30, 1913.

Name.	Type.	Date of trial.	Speed required by contract.	Speed obtained on trial.	Date of preliminary acceptance.	Date of final acceptance.	By whom built.
Jarvis....	Destroyer.	Sept. 18, 1912..	29.5	30.01	Oct. 21, 1912	Dec. 11, 1913	New York Shipbuilding Co.
Henley....	do.....	Sept. 24, 1912.	29.5	30.32	Dec. 5, 1912	June 15, 1914	Fore River Shipbuilding Co.
Beale.....	do.....	June 25, 1912..	29.5	29.65	Aug. 29, 1912	Oct. 15, 1913	Wm. Cramp & Sons.
Cassin.....	do.....	June 26, 1913...	29.0	30.14	Aug. 8, 1913	June 4, 1914	Bath Iron Works.
Cummings.....	do.....	Aug. 27, 1913...	29.0	30.57	Sept. 19, 1913	Oct. 17, 1914	Do.
E-2.....	Submarine	Nov. 14 to 23, 1911.	.....	.....	Feb. 14, 1912	July 19, 1913	Fore River Shipbuilding Co.
F-4.....	do.....	Mar. 31 to Apr. 22, 1913.	.....	.....	May 2, 1913	June 10, 1914	The Moran Co.
G-1.....	do.....	Sept. 3, 1912..	.....	.....	Oct. 28, 1912	Oct. 24, 1913	Newport News Shipbuilding Co.
Proteus...	Fuel ship.	June 27, 1913...	14.0	14.67	July 5, 1913	Aug. 4, 1914	Do.
Orion.....	do.....	July 10 to 12, 1912.	14.0	14.47	July 24, 1912	Jan. 26, 1914	Maryland Steel Co.

Statement of data relative to trials of vessels which have been preliminarily accepted previous to June 30, 1913, but not finally accepted June 30, 1914.

Name.	Type.	Date of trial.	Speed required by contract.	Speed obtained on trial.	Date of preliminary acceptance.	By whom built.
Arkansas.....	Battleship..	June 4, 1912.....	20.5	21.05	Sept. 14, 1912	New York Shipbuilding Co.
Wyoming.....	do.....	July 19 to 22, 1912	20.5	21.22	Sept. 23, 1912	Wm. Cramp & Sons.
Nebraska.....	do.....	July 17, 1906.....	19.0	19.06	May 31, 1907	Moran Bros. Co.
Jason.....	Fuel ship...	June 18, 1913.....	14.0	14.32	June 26, 1913	Maryland Steel Co.
Sonoma.....	Tug.....	Aug. 12 to 17, 1912.	14.0	13.08	Sept. 5, 1912	New York Shipbuilding Co.
Ontario.....	do.....	do.....	14.0	13.23	Sept. 3, 1912	Do.

Vessels dropped from the Navy since June 30, 1913.

Name.	Type.	Stricken from the Navy Register.
Alexander.....	Fuel ship.....	Aug. 16, 1913
Independence.....	Unserviceable.	Sept. 3, 1913
Restless.....	Yacht.....	Sept. 5, 1913
Davis.....	Torpedo boat...	Nov. 12, 1913
Craven.....	do.....	Nov. 15, 1913
Stockton.....	do.....	Do.
Wilkes.....	do.....	Do.
Stringham.....	do.....	Nov. 28, 1913
Manly.....	do.....	Apr. 2, 1914
Gwin.....	do.....	Apr. 20, 1914
Panay.....	Gunboat.....	June 19, 1914
Omaha.....	Unserviceable.	July 10, 1914
Mississippi ¹	Battleship.....	July 21, 1914
Idaho ¹	do.....	July 30, 1914

¹ Mississippi and Idaho sold in accordance with the provision contained in the naval act approved June 30, 1914.

Vessels building for the increase of the Navy are listed in the following tables, which include all those authorized by law, with the exception of three battleships, six destroyers, and eight or more submarines appropriated for by the last Congress.

Vessels building under contract.

Name.	By whom building.	Estimate of—		Contract time.	Expiration of contract time.
		Degree of completion Oct. 1, 1914.	Probable date of completion.		
BATTLESHIPS.					
Nevada.....	Fore River Shipbuilding Co...	<i>Per cent.</i> 75.8	Dec. 4, 1915	<i>Months.</i> 36	Jan. 22, 1915
Oklahoma.....	New York Shipbuilding Co...	76.3	Sept. 22, 1915	36	Do.
Pennsylvania.....	Newport News Shipbuilding Co.	51.6	June 4, 1916	36	Feb. 28, 1916
TORPEDO-BOAT DESTROYERS.					
Downes.....	New York Shipbuilding Co...	95.3	Nov. 14, 1914	24	Sept. 8, 1913
O'Brien.....	Wm. Cramp & Sons.....	85.2	Feb. 10, 1915	23	Nov. 7, 1914
Nicholson.....	do.....	84.2	Feb. 22, 1915	23½	Nov. 22, 1914
Winslow.....	do.....	79.3	Apr. 28, 1915	24	Dec. 7, 1914
Cushing.....	Fore River Shipbuilding Co...	68.1	June 8, 1915	24	Dec. 11, 1914
Ericsson.....	New York Shipbuilding Co...	85.3	Apr. 4, 1915	24	Dec. 16, 1914.

Vessels building under contract—Continued.

Name.	By whom building.	Estimate of—		Contract time.	Expiration of contract time.
		Degree of completion Oct. 1, 1914.	Probable date of completion.		
TORPEDO-BOAT DESTROYERS—contd.					
		Per cent.		Months.	
Tucker.....	Fore River Shipbuilding Co..	16.0	Feb. 23, 1916	24	Sept. 22, 1915
Conyngham.....	Wm. Cramp & Sons.....	28.7	Dec. 2, 1915	23½	Sept. 17, 1915
Porter.....	do.....	15.0	Feb. 26, 1916	24	Oct. 2, 1915
Wadsworth.....	Bath Iron Works.....	62.2	July 3, 1915	24	Oct. 15, 1915
Jacob Jones.....	New York Shipbuilding Co..	28.6	Nov. 15, 1915	24	Do.
Wainwright.....	do.....	28.1	Nov. 18, 1915	24	Do.
SUBMARINE TORPEDO BOATS.					
G-4 ¹	Wm. Cramp & Sons.....	96.4	.....	30	Oct. 24, 1911
G-2 ²	Newport News Shipbuilding Co.	89.7	.....	28	Aug. 21, 1911
G-3 ²	Lake Torpedo Boat Co.....	83.0	.....	20	Sept. 19, 1912
K-3.....	Union Iron Works.....	99.7	Sept. 3, 1914	26	July 30, 1913
K-4.....	The Moran Co.....	99.7	Oct. 3, 1914	27	Aug. 30, 1913
K-7.....	Union Iron Works.....	98.1	Nov. 27, 1914	26	Dec. 27, 1913
K-8.....	do.....	98.1	do.....	27	Jan. 27, 1914
L-1.....	Fore River Shipbuilding Co..	61.7	July 4, 1915	22	Dec. 1, 1914
L-2.....	do.....	58.8	July 28, 1915	23	Jan. 1, 1915
L-3.....	do.....	58.3	Aug. 13, 1915	24	Feb. 1, 1915
L-4.....	do.....	57.3	Sept. 1, 1915	25	Mar. 1, 1915
L-5.....	Lake Torpedo Boat Co.....	37.5	Jan. 27, 1916	24	Apr. 24, 1916
L-6.....	Craig Shipbuilding Co.....	38.1	Dec. 27, 1915	24	Do.
L-7.....	do.....	36.4	Jan. 9, 1916	24	Do.
L-9.....	Fore River Shipbuilding Co..	20.0	Mar. 14, 1916	24	Mar. 14, 1916
L-10.....	do.....	19.3	Apr. 14, 1916	25	Apr. 14, 1916
L-11.....	do.....	4.1	Sept. 29, 1916	26	Sept. 29, 1916
M-1.....	do.....	44.8	Nov. 22, 1915	26	Apr. 1, 1915
DESTROYER TENDER.					
Melville.....	New York Shipbuilding Co..	65.5	June 5, 1915	24	June 20, 1915
SUBMARINE TENDERS.					
Fulton.....	New London Ship & Engine Co.	94.0	Jan. 10, 1915	24	June 19, 1914
Bushnell.....	Seattle Construction Co.....	63.0	Aug. 6, 1915	21	Mar. 30, 1915

¹ Conditionally delivered.² Contracts forfeited, vessels being completed at navy yard, New York, N. Y.*Vessels building at navy yards.*

Name.	Where building.	Estimate of—		Con- struc- tional period.	Expiration of construc- tional period.
		Degree of com- pletion Oct. 1, 1914.	Probable date of com- pletion.		
BATTLESHIP.					
Arizona.....	Navy yard, New York, N. Y..	<i>Per cent.</i> 33.6	Sept. 15, 1916	<i>Months.</i> 36	Sept. 15, 1916
AUXILIARIES.					
Kanawha.....	Navy yard, Mare Island, Cal..	78.9	Aug. 1, 1915	22	Aug. 1, 1915
Maumee.....	do.....	48.8	Jan. 1, 1916	27	Jan. 1, 1916
Transport No. 1.....	Navy yard, Philadelphia, Pa..	1.3			
Supply Ship No. 1.....	Navy yard, Boston, Mass.....	0.0			
SUBMARINE.					
L-8.....	Navy yard, Portsmouth, N. H.	0.0		24	

VESSELS LAUNCHED SINCE JUNE 30, 1913.

The following is a list of vessels launched since June 30, 1913, together with the date of launching:

Name.	Launched.	Name.	Launched.
H-3.....	July 3, 1913	McDougal.....	Apr. 22, 1914
Cummings.....	Aug. 6, 1913	Palos.....	Apr. 23, 1914
K-1.....	Sept. 3, 1913	Monocacy.....	Apr. 27, 1914
K-2.....	Oct. 4, 1913	Fulton.....	June 6, 1914
Downes.....	Nov. 8, 1913	K-7.....	June 20, 1914
G-3.....	Dec. 27, 1913	K-8.....	July 11, 1914
Sacramento.....	Feb. 21, 1914	Nevada.....	Do.
K-3.....	Mar. 14, 1914	Kanawha.....	Do.
K-5.....	Mar. 17, 1914	O'Brien.....	July 20, 1914
Oklahoma.....	Mar. 23, 1914	Nicholson.....	Aug. 19, 1914
K-4.....	Mar. 19, 1914	Eriasson.....	Aug. 22, 1914
K-6.....	Mar. 26, 1914		

NEW VESSELS AUTHORIZED.

BATTLESHIPS.

The plans and specifications for first-class battleships *No. 40 (California)*, *No. 41 (Mississippi)*, and *No. 42 (Idaho)*, authorized by act of Congress approved June 30, 1914, were completed and circular signed by the Secretary of the Navy, July 24, 1914, and issued to the bidders upon request after August 1, 1914.

The general dimensions and features of these vessels are as follows:

Length on designer's water line.....	600 feet.
Length over all.....	624 feet.
Breadth, extreme, to outside of plating.....	97 feet 2½ inches.
Breadth, extreme, to outside of armor.....	97 feet 4½ inches.
Mean trial displacement.....	32,000 tons.
Mean draft to bottom of keel at trial displacement (about).....	30 feet.
Full supply of fuel oil.....	2,200 tons.
Maximum stowage of fuel oil.....	3,271 tons.
Fuel oil carried on trial.....	1,467 tons.
Feed water carried on trial.....	209 tons.
Speed on trial, not less than.....	21 knots.
Armament:	

Main battery—

Twelve 14-inch 50-caliber breech-loading rifles.

Four submerged torpedo tubes.

Secondary battery—

Twenty-two 5-inch 51-caliber rapid-fire guns.

Four 3-pounder saluting guns.

Two 1-pounder guns for boats.

One 3-inch fieldpiece.

Two 30-caliber machine guns.

Bids for the construction of two of these vessels to be built by contract were opened at the department, October 6, 1914.

Proposals received for the construction of two battleships of Group Nos. 40-42—California, Mississippi, and Idaho.

[Class 1: Hull and turbine propelling machinery in accordance with the department's plans. Class 2: Hull and equipment in accordance with the department's plans; machinery, bidder's design.]

Bidder.	Class 1.	Class 2.	Time.	Speed.	Type of propelling machinery.
			<i>Months.</i>	<i>Knots.</i>	
Fore River Shipbuilding Corporation.		\$7,440,000	36	21	Curtis turbines and reduction gears with cast-steel drums; 4 shafts.
Do.....		7,540,000	36	21	Same with forged-steel drums.
New York Shipbuilding Co.....	\$7,250,000		36	21	Department's plans of turbine-propelling machinery and boilers; 4 shafts.
Do.....		7,350,000	36	21	Curtis turbines with geared cruising turbines; 4 shafts.
Do.....		7,175,000	36	21	Parsons all-geared turbines; 4 shafts.
Newport News Shipbuilding & Dry Dock Co.	7,195,000		36	21	Department's plan of turbine-propelling machinery and boilers; 4 shafts.
Do.....		7,150,000	36	21	Curtis turbines; 4 shafts.
Do.....		*7,115,000	36	21	Do.
Wm. Cramp & Sons S. & E. B. Co..	7,625,000		36	21	Department's plan of turbine-propelling machinery and boilers; 4 shafts.

¹Contract awarded.

NOTE.—All bids are for 1 vessel only.

DESTROYERS "NOS. 63" TO "68."

The plans and specifications for torpedo boat destroyers *Nos. 63* to *68*, authorized by act of Congress approved June 30, 1914, were completed and circular signed by the Secretary of the Navy August 25, 1914, and issued to the bidders upon request after September 5, 1914.

The general dimensions and features of each vessel are as follows:

Length on designer's waterline.....	310 feet.
Length over all.....	315 feet 3 inches.
Breadth, molded, extreme.....	29 feet 10 inches.
Mean trial displacement.....	1,110 tons.
Mean draft to bottom of keel at mean trial displacement.....	9 feet 5½ inches.
Total fuel oil capacity.....	290 tons.
Speed on trial not less than.....	29½ knots.

Battery:

Four 4-inch rapid-fire guns (two aeroplane mounts).

Four 21-inch triple torpedo tubes (deck).

Bids for the construction of torpedo boat destroyers *Nos. 63* to *68* will be opened at the department November 10, 1914.

SUBMARINES "NOS. 44" TO "46."

Upon request by the Lake Torpedo Boat Co. (of New Jersey), the department informed them in November, 1913, that they would be allowed reasonable time for proceeding with the construction of submarines *No. 44* (*L-5*), *No. 45* (*L-6*), and *No. 46* (*L-7*), after the then contemplated reorganization of the Lake Co. should have been effected. In January, 1914, the Lake Torpedo Boat Co. offered to construct these vessels in accordance with the plans and specifications of the larger and improved type submitted with their bid on the subsequent class of vessels, *Nos. 48* to *51*. Accordingly in March, 1914, the department canceled the contracts with the Lake Torpedo Boat Co. (of New Jersey) for submarines *L-5*, *L-6*, and *L-7*, and

then entered into new contracts with the Lake Torpedo Boat Co. (of Maine) for the construction of these vessels at the same prices as obtained in the original contracts, but for a later and improved type of vessel as designed for, and submitted with the bids for submarines *Nos. 48 to 51*.

A new contract for submarine *No. 44 (L-5)* was formally entered into with the Lake Torpedo Boat Co. (of Maine) on April 24, 1914, at a price of \$535,000, to be built at Bridgeport, Conn., and to be completed within 24 months.

New contracts for submarines *Nos. 45 and 46 (L-6 and L-7)* were formally entered into with the Lake Torpedo Boat Co. (of Maine) on April 24, 1914, at a price of \$560,000 each, to be built at Long Beach, Cal., and to be completed within 24 months.

SUBMARINES "NOS. 48" TO "51."

Circular defining the chief characteristics of submarine torpedo boats *Nos. 48 to 51*, inclusive (*L-8, L-9, L-10, and L-11*), authorized by act of Congress approved March 4, 1913, was signed by the Acting Secretary of the Navy September 18, 1913, and issued to bidders upon request thereafter.

Bids for the construction of these vessels were opened at the department December 6, 1913, and contracts were awarded as follows:

The department decided that submarine *No. 48 (L-8)* be constructed by the Government, and designated the navy yard, Portsmouth, N. H., as the place of building. This submarine is to be built from the plans approved for submarines *L-5, L-6, and L-7*, constructed by the Lake Torpedo Boat Co., and an agreement was entered into with the Lake Torpedo Boat Co. covering the furnishing of the necessary plans on June 29, 1914.

Contracts for submarines *Nos. 49 and 50 (L-9 and L-10)* were signed with the Electric Boat Co., New York, N. Y., on March 14, 1914, at a price of \$535,000 each, to be completed within 24 and 25 months, respectively.

Contract for submarine *No. 51 (L-11)* was signed with the Electric Boat Co., New York, N. Y., on July 29, 1914, at a price of \$523,000; to be completed within 26 months.

SUBMARINES "NOS. 52," AND "53" TO "59," ETC.

Circulars defining the chief characteristics of submarine torpedo boats *Nos. 52, and 53 to 59, etc.*, authorized by act of Congress, approved June 30, 1914, were signed by the Secretary of the Navy July 17 and July 10, 1914, respectively, and issued to bidders upon request after August 15, 1914.

Bids for the construction of these vessels will be opened at the department December 15, 1914.

SUPPLY SHIP "NO. 1."

The plans and specifications for supply ship *No. 1*, authorized by act of Congress approved March 4, 1913, were completed and circular signed by the Assistant Secretary of the Navy October 4, 1913, and issued to bidders upon request after October 15, 1913.

The general dimensions and features of the vessel are as follows:

Length between perpendiculars.....	400 feet.
Length over all.....	422 feet 11 inches.
Beam, molded.....	55 feet.
Depth at mid-length, at side, molded.....	38 feet 6 inches.
Mean trial displacement.....	8,500 tons.
Draft, at mean trial displacement.....	20 feet 8 inches.
Speed on trial, full load.....	14 knots.

Battery:

Four 5-inch rapid-fire guns.

Bids for the construction of supply ship *No. 1* were opened at the department December 20, 1913.

Proposals received for the construction of supply ship "No. 1."

[Class 1: Hull, equipment, and reciprocating propelling machinery, department's plans. Class 2: Hull and equipment, department's plans; machinery, bidder's design.]

Bidder.	Class 1.	Class 2.	Time.	Speed.	Type of propelling machinery.
			<i>Months.</i>	<i>Knots.</i>	
New York Shipbuilding Co.	\$1,399,500	.....	24	14	Department's design of reciprocating engines.
Seattle Construction & Dry Dock Co.	1,404,000	.....	21	14	Department's design.
Fore River Shipbuilding Corporation.	1,419,000	.....	24	14	Do.
Wm. Cramp & Sons Ship & Engine Building Co.	1,401,000	.....	24	14	Do.
Newport News Shipbuilding & Dry Dock Co.	\$1,350,000	\$1,320,000	22	14	Department's design. Twin screw reciprocating engines; water-tube boilers and auxiliaries of bidder's design.

¹ If the progressive trial be made over the course at the Delaware Breakwater, and if the other trials require by paragraph 11 of the contract be made in the vicinity of the Capes of the Delaware, deduct \$6,100 from the price stated.

² If vessel is standardized on Lewes, Del., course, the sum of \$1,345,000.

³ If vessel is standardized on Lewes, Del., course, the sum of \$1,315,000.

On February 19, 1914, the department directed that supply ship *No. 1* be built at the navy yard, Boston, Mass.

TRANSPORT "NO. 1."

The plans and specifications for transport *No. 1*, authorized by act of Congress approved March 4, 1913, were completed and circular signed by the Assistant Secretary of the Navy October 4, 1913, and issued to bidders upon request after October 15, 1913.

The general dimensions and features of the vessel are as follows:

Length between perpendiculars.....	460 feet.
Length over all.....	482 feet 9½ inches.
Beam, molded.....	60 feet 10½ inches.
Depth at midlength, at side molded.....	39 feet 3¼ inches.
Mean trial displacement.....	10,000 tons.
Draft, at mean trial displacement.....	19 feet 10½ inches.
Speed on trial.....	14 knots.

Battery:

8, 5-inch 51-caliber rapid-fire guns.

2, 3-pounder saluting guns.

Bids for the construction of transport *No. 1* were opened at the department December 20, 1913.

Proposals received for the construction of Transport "No. 1."

[Class 1: Hull, equipment, and reciprocating propelling machinery, department's plans. Class 2: Hull and equipment, department's plans; machinery, bidder's design.]

Bidders.	Class 1.	Class 2.	Time.	Speed.	Type of propelling machinery.
			<i>Months.</i>	<i>Knots.</i>	
Wm. Cramp & Sons Ship & Engine Co.	¹ \$1,832,000	.....	24	14	Department's design.
Newport News Shipbuilding & Dry Dock Co.	² \$1,730,000	.....	24	14	Do.
Do.....	² \$1,700,000	.....	24	14	Twin-screw reciprocating engines; water-tube boilers.
Fore River Shipbuilding Corporation.	1,804,000	.....	24	14	Department's design.
New York Shipbuilding Co..	1,752,000	.....	24	14	Do.
Seattle Construction & Dry Dock Co.	1,931,100	.....	24	14	Do.

¹ \$6,000 less if trial is held on Lewes course.

² If vessel is standardized on Delaware course, \$1,695,000 and \$1,725,000.

On February 19, 1914, the department directed that transport *No. 1* be built at the navy yard, Philadelphia, Pa.

PANAMA COLLIERIES.

Panama colliers *Ulysses* and *Achilles* were designed by the Navy Department and are being constructed for the Panama Canal under the supervision of the Navy Department.

The plans and specifications for Panama colliers *Ulysses* and *Achilles* authorized by act of Congress approved June 23, 1913, were completed and circular signed by the Secretary of the Navy December 9, 1913, and issued to the bidders upon request thereafter.

The general dimensions and features of each vessel are as follows:

Length between perpendiculars.....	514 feet.
Length over all.....	536 feet.
Beam, molded.....	65 feet.
Depth at side.....	39 feet 6 inches.
Mean trial displacement.....	19,585 tons.
Mean draft, full load.....	28 feet 1 inch.
Cargo coal capacity.....	12,000 tons.
Bunker capacity.....	1,200 tons.
Speed, not less than.....	14 knots.

Bids for the construction of Panama colliers *Ulysses* and *Achilles* were opened at the department February 2, 1914.

Proposals received for the construction of Panama colliers "Ulysses" and "Achilles."

[Class 1: Hull fittings, machinery, outfit, and equipments, department's plans. Class 2: Hull fittings, machinery outfit, and equipments, bidder's plans. Class 3: Same as Class 1, excepting cargo coal-handling apparatus will be omitted. Class 4: Same as class 2, excepting cargo coal-handling apparatus will be omitted.]

Bidders.	Class 1.	Class 2.	Class 2 modified.	Class 3.	Class 4.	Class 4 modified.	Time, months.	Speed, knots.	Type of propelling machinery.
Maryland Steel Co.....	\$1,022,000	.....	.....	.....	.....	16	14	Reciprocating engines, bidder's design.
Do.....	\$1,894,500	.....	.....	.....	16	14	Do.
Do.....	16	14	Do.
Do.....	16	14	Do.
Seattle Construction & Dry Dock Co.....	\$1,436,000	.....	.....	.....	.....	\$1,887,500	.....	.....	.....
Do.....	18	14	Department's plans.
Newport News Ship Building & Dry Dock Co.....	\$1,400,000	.....	.....	18	14	Do.
Do.....	\$1,986,000	.....	.....	.....	Similar to department's design.
Do.....	18	14	.....

¹ Each.

² Duplicating contracts for navy colliers "Orion" and "Jason" with modifications in hatches, coal handling apparatus, ceiling tank top in cargo holds, to adapt ships to shore unloading apparatus at Isthmus, holds and bunkers to carry 12,000 tons of cargo and 1,200 tons in bunkers on not exceeding 28 feet 3 inches mean draft.

³ Trials to be run over Delaware breakwater course.

Contracts for Panama colliers *Ulysses* and *Achilles* were signed with the Maryland Steel Co., Sparrows Point, Md., on April 9, 1914, at a price of \$987,500 each; to have the bidder's design of reciprocating propelling machinery installed, and to be completed within 16 months.

WRECKING PONTOONS FOR SUBMARINES.

The appropriation of \$300,000 made in the naval act approved March 4, 1913, "for construction or purchase of a testing and wrecking pontoon for submarines, to be available until expended," was by the act of June 30, 1914, made available until expended for the construction of submarines *Nos. 52, and 53 to 59, etc.*

71807°—NAVY 1914—18

Progress of work on vessels under construction.

[Taken from reports of superintending constructors.]

Name of vessel.	Name of superintending constructor.	Contract signed.	Expiration of contract period.	Contract time extended to—	Lines laid.	First hull material ordered.	Keel laid.	First frame erected.	First large casing received.
Pennsylvania.	T. G. Roberts, S. F. Smith, and E. F. Egert.	Feb. 26, 1913	Feb. 26, 1916	.....	May 24, 1913	Apr. 18, 1913	Oct. 27, 1913	Nov. 6, 1913	Dec. 2, 1913
Nevada.	L. Bankson and T. G. Roberts.	Jan. 22, 1912	Jan. 22, 1915	.....	Apr. 6, 1912	Mar. 4, 1912	Nov. 4, 1912	Nov. 13, 1912	May 23, 1912
New York.	W. J. Barker and R. S. Caden.	May 1, 1911	May 1, 1914	.....	May 15, 1911	May 5, 1911	Sept. 11, 1911	Oct. 1, 1911	Oct. 2, 1911
Texas.	T. G. Roberts, S. F. Smith, and E. F. Egert.	Dec. 17, 1910	Dec. 17, 1913	.....	Jan. 16, 1911	Jan. 4, 1911	Apr. 17, 1911	Apr. 21, 1911	July 1, 1911
Oklahoma.	J. G. Waressey.	Jan. 22, 1912	Jan. 22, 1915	.....	Aug. 28, 1912	Feb. 10, 1912	Oct. 26, 1912	Oct. 29, 1912	Mar. 6, 1912
Arizona.	R. Stocker.	Sept. 15, 1912	Sept. 15, 1916	.....	July 10, 1914	.....	Mar. 16, 1914	Mar. 18, 1914	Mar. 17, 1914
Monterey.	T. F. Rubin and H. M. Gleason.	Aug. 26, 1912	.....	.....	Nov. 1, 1912	Jan. 8, 1913	Apr. 26, 1913	Apr. 29, 1913	.....
Palos.	do.	do.	do.	.....	do.	do.	do.	do.	.....
Sacramento.	E. Snow and L. Bankson.	Sept. 9, 1912	June 9, 1914	.....	Sept. 12, 1912	Oct. 1, 1912	May 1, 1913	May 6, 1913	May 20, 1913
G-4.	do.	Apr. 24, 1909	Oct. 24, 1911	July 7, 1913	July 7, 1909	June 13, 1909	July 9, 1910	Aug. 23, 1910	Dec. 14, 1909
G-5.	S. M. Henry and H. Williams.	Apr. 21, 1909	Aug. 31, 1911	.....	Aug. 31, 1909	Apr. 22, 1909	Oct. 20, 1909	Oct. 27, 1909	Oct. 28, 1909
H-1.	A. H. Van Keuren.	Aug. 10, 1910	Jan. 10, 1913	.....	Dec. 9, 1910	Dec. 7, 1910	Mar. 23, 1911	Apr. 1, 1911	Apr. 19, 1911
H-2.	do.	do.	do.	.....	do.	do.	Mar. 23, 1911	do.	do.
H-3.	G. C. Westervelt.	Feb. 10, 1913	Feb. 10, 1913	.....	Nov. 17, 1910	Nov. 1, 1910	Apr. 3, 1911	Apr. 13, 1911	Apr. 16, 1911
G-3.	S. M. Henry and H. Williams.	Jan. 19, 1911	Sept. 19, 1912	Feb. 14, 1913	Feb. 22, 1911	Sept. 12, 1910	Mar. 30, 1911	Apr. 13, 1911	Feb. 7, 1911
K-1.	L. Bankson and T. G. Roberts.	May 31, 1911	June 30, 1913	.....	Dec. 16, 1911	Aug. 4, 1911	Feb. 20, 1912	Feb. 28, 1912	May 11, 1912
K-2.	do.	do.	do.	.....	do.	do.	do.	Feb. 29, 1912	Do.
K-3.	A. H. Van Keuren.	do.	July 31, 1913	.....	Nov. 12, 1911	Aug. 28, 1911	Jan. 15, 1912	Jan. 22, 1912	Do.
K-4.	G. C. Westervelt.	do.	Aug. 31, 1913	Dec. 5, 1913	Nov. 9, 1911	Aug. 8, 1911	Jan. 27, 1912	Mar. 15, 1912	June 15, 1912
K-5.	L. Bankson and T. G. Roberts.	Oct. 27, 1911	Oct. 27, 1913	Jan. 27, 1914	Dec. 16, 1911	Nov. 29, 1911	June 10, 1912	June 27, 1912	June 10, 1912
K-6.	do.	do.	Nov. 27, 1913	Dec. 27, 1913	do.	do.	June 19, 1912	July 2, 1912	Do.
K-7.	A. H. Van Keuren.	do.	Dec. 27, 1913	do.	Mar. 1, 1912	Dec. 20, 1911	May 10, 1912	June 4, 1912	Aug. 22, 1912
K-8.	do.	do.	Jan. 27, 1914	do.	do.	do.	do.	do.	Do.
L-1.	L. Bankson and T. G. Roberts.	Feb. 1, 1913	Dec. 1, 1914	.....	Dec. 4, 1913	Apr. 8, 1913	Apr. 13, 1914	Apr. 21, 1914	.....
L-2.	do.	do.	Jan. 1, 1915	.....	do.	do.	Mar. 19, 1914	Apr. 4, 1914	.....
L-3.	do.	do.	Feb. 1, 1915	.....	do.	do.	Apr. 18, 1914	Apr. 27, 1914	.....
L-4.	do.	do.	Mar. 1, 1915	.....	do.	do.	Mar. 23, 1914	Apr. 6, 1914	.....
L-5.	do.	do.	Apr. 24, 1916	.....	Mar. 6, 1914	Mar. 26, 1913	May 14, 1914	May 16, 1914	.....

L-6	C. A. Harrington.	do.	do.	May 1, 1914	Mar. 17, 1913	May 27, 1914	May 29, 1914	
L-7	do.	do.	do.	do.	do.	June 2, 1914	June 10, 1914	
L-8	L. S. Adams.	Mar. 14, 1914	Mar. 14, 1916	Dec. 4, 1913	Mar. 13, 1914			
L-9	T. G. Roberts.	do.	do.	do.	do.			
L-10	do.	July 29, 1914	Sept. 29, 1916			July 2, 1914		
L-11	L. Bankson and T. G. Roberts.	Feb. 4, 1913	Apr. 4, 1915	Jan. 6, 1914	Apr. 8, 1913			
Fulton.	do.	June 19, 1912	June 19, 1914	Apr. 7, 1913	Aug. 24, 1913	Oct. 2, 1913	Oct. 21, 1913	May 10, 1913
Metville.	J. G. Tawressey.	June 20, 1913	June 20, 1915	Aug. 27, 1913	Aug. 16, 1913	Nov. 11, 1913	Nov. 18, 1913	Nov. 26, 1913
Bushnell.	G. C. Westervelt.	June 30, 1913	Mar. 30, 1915	July 15, 1913	Aug. 2, 1913	Jan. 3, 1914	Dec. 12, 1913	Dec. 5, 1913
Transport No. 1.	E. Snow.	Feb. 19, 1914	do.		Feb. 21, 1914			
Supply Ship No. 1.	W. J. Baxter.	Feb. 19, 1914	do.					
Downes	J. G. Tawressey.	Sept. 8, 1911	Sept. 8, 1913	Sept. 30, 1911	Oct. 4, 1911	June 27, 1912	Sept. 19, 1912	July 1, 1912
Aywin.	E. Snow and L. Bankson.	Sept. 7, 1911	July 22, 1913	Oct. 16, 1911	Oct. 5, 1911	Mar. 7, 1912	Mar. 20, 1912	Jan. 22, 1912
Parker.	do.	do.	Aug. 4, 1913	do.	do.	Mar. 11, 1912	Mar. 22, 1912	Feb. 12, 1912
Benham.	do.	do.	Aug. 18, 1913	do.	do.	Mar. 14, 1912	Mar. 26, 1912	Do.
Batch.	do.	do.	Sept. 7, 1913	do.	do.	May 7, 1912	May 22, 1912	Mar. 30, 1912
O'Brien.	do.	Dec. 7, 1912	Nov. 7, 1914	Dec. 20, 1912	Dec. 17, 1912	Sept. 8, 1913	Oct. 13, 1913	Nov. 7, 1913
Nicholson.	do.	do.	Dec. 7, 1914	do.	do.	Oct. 1, 1913	Oct. 17, 1913	Nov. 10, 1913
Winslow.	do.	do.	Dec. 7, 1914	do.	do.	July 29, 1913	Sept. 4, 1913	Nov. 19, 1913
McDougal.	L. S. Adams.	Dec. 16, 1912	Sept. 16, 1914	Mar. 24, 1913	Dec. 28, 1912	Sept. 23, 1913	Nov. 18, 1913	July 2, 1913
Cushing.	L. Bankson and T. G. Roberts.	Dec. 11, 1912	Dec. 11, 1914			Nov. 10, 1913	Nov. 12, 1913	Mar. 14, 1913
Eriksson.	J. G. Tawressey.	Dec. 16, 1912	Dec. 16, 1914	Mar. 8, 1913	Jan. 2, 1913	Nov. 10, 1913	Nov. 12, 1913	Mar. 14, 1913
Tucker.	T. G. Roberts.	Sept. 22, 1913	Sept. 22, 1915	Feb. 7, 1914	Nov. 5, 1913	July 27, 1914	Jan. 13, 1914	May 4, 1914
Conryngham.	L. Bankson.	Oct. 2, 1913	Sept. 12, 1915	Oct. 17, 1913	Sept. 30, 1913	Feb. 23, 1914	Apr. 26, 1914	May 8, 1914
Parker.	do.	do.	do.	Jan. 10, 1914	Oct. 28, 1913	Aug. 3, 1914	Apr. 13, 1914	
Wadsworth.	L. S. Adams.	Oct. 15, 1913	Oct. 15, 1915	Dec. 12, 1913	Oct. 30, 1913	Sept. 1, 1914	Dec. 11, 1913	Do.
Jacob Jones.	J. G. Tawressey.	do.	do.	May 15, 1913	July 3, 1913	Dec. 8, 1913	Apr. 11, 1914	
Valiant Light.	do.	do.	do.	do.	do.	July 23, 1914	June 8, 1914	Do.
Kanawha.	T. F. Fuhrman and H. M. Gleason.	Jan. 28, 1913	Aug. 1, 1915	Apr. 22, 1914	do.	June 1, 1914	June 22, 1914	
Maumee.	do.	Mar. 29, 1913	Jan. 1, 1916	do.	do.	June 8, 1914	June 23, 1914	July 5, 1914
Ulysses.	L. B. McBride and G. L. Atkinson.	Apr. 9, 1914	Aug. 9, 1915	do.	do.	June 8, 1914	June 23, 1914	
Achilles.	do.	do.	do.	do.	do.	June 8, 1914	June 23, 1914	

¹ Contracts forfeited, vessel being completed at navy yard, New York, N. Y.

² Being constructed for the Panama Canal under the supervision of the Navy Department.

Aywn.....	May 21, 1912	Aug. 28, 1912	Nov. 23, 1912	May 15, 1913	Dec. 8, 1913	Jan. 17, 1914	Jan. 17, 1914
Parter.....	May 29, 1912	Nov. 4, 1912	Feb. 8, 1913	Nov. 13, 1913	Nov. 7, 1913	Dec. 29, 1913	Dec. 30, 1913
Bennam.....	.....do.	.....do.	Mar. 22, 1913	Dec. 13, 1913	Dec. 14, 1913	Jan. 20, 1914	Jan. 20, 1914
Reich.....	May 22, 1912	Oct. 10, 1912	Dec. 21, 1912	Feb. 10, 1914	Feb. 18, 1914	Mar. 26, 1914	Mar. 26, 1914
O'Brien.....	Dec. 2, 1913	Mar. 27, 1914	July 26, 1914	.....	.....	.....	.....
Winson.....	Dec. 7, 1913	May 27, 1914	Aug. 19, 1914	.....	.....	.....	.....
Winsow.....	Jan. 7, 1914	May 27, 1914	.....	.....	.....	.....	.....
McDougal.....	July 29, 1913	Jan. 19, 1914	Apr. 22, 1914	Apr. 26, 1914	May 12, to 15, 1914.	June 16, 1914	June 16, 1914
Cushing.....	.....	.....	.....	.....	.....	.....	.....
Erleson.....	Jan. 28, 1914	Mar. 25, 1914	Aug. 22, 1914	.....	.....	.....	.....
Tucker.....	.....	.....	.....	.....	.....	.....	.....
Conaghan.....	.....	.....	.....	.....	.....	.....	.....
Perkins.....	.....	.....	.....	.....	.....	.....	.....
Wadsworth.....	.....	.....	.....	.....	.....	.....	.....
Jacob Jones.....	.....	.....	.....	.....	.....	.....	.....
Wagnerlight.....	.....	.....	.....	.....	.....	.....	.....
Kanawha.....	.....	.....	.....	.....	.....	.....	.....
Manatee.....	May 1, 1914	Apr. 13, 1914	July 11, 1914	.....	.....	.....	.....
Memee.....	.....	.....	.....	.....	.....	.....	.....
Ulysses.....	July 31, 1914	.....	.....	.....	.....	.....	.....
Achilles.....	Aug. 10, 1914	.....	.....	.....	.....	.....	.....

1 Conditionally.

Respectfully,

R. M. WATT,
*Chief Constructor, United States Navy,
 Chief of Bureau.*

The SECRETARY OF THE NAVY.

REPORT OF CHIEF OF BUREAU OF STEAM ENGINEERING.

NAVY DEPARTMENT,
BUREAU OF STEAM ENGINEERING,
Washington, D. C., September 26, 1914.

The appropriations made for the support of the bureau were:

Bureau of Steam Engineering:	
Steam machinery.....	\$6, 006, 000
Engineering Experiment Station, Annapolis, Md.—	
Experimental and research work.....	60, 000
Equipment of building.....	26, 000
Development of heavy oil engine.....	250, 000
Salaries, Bureau of Steam Engineering.....	27, 390
Allotments made by the department for work under this bureau chargeable to appropriations made for the Bureau of Equipment:	
Equipment of vessels.....	2, 035, 000
Contingent, equipment.....	2, 000
Salaries, Bureau of Equipment.....	18, 100
Funds available under joint appropriations:	
Increase of Navy, construction and machinery.....	19, 818, 228
Increase of Navy, torpedo boats.....	3, 353, 275
Increase of Navy, equipment.....	430, 000

The general operations of the bureau have, as usual, been centered chiefly in the maintenance in efficient condition of the machinery of the fleet, in the designing of machinery for new vessels, and in the improvement and extension of the radio service.

The conversion of the *Vestal* into a repair ship was completed, and her assignment to the Atlantic Fleet has demonstrated the wisdom of having with the fleet a vessel capable of undertaking the major repair work for which the *Vestal* is equipped. The commander in chief has given testimony of her worth during the protracted stay of the fleet in Mexican waters, where many repairs were accomplished which but for the presence of the *Vestal* might have necessitated the return of a vessel to a navy yard. The work of conversion of the *Prometheus* is nearly completed, but it is a matter of regret that, owing to a decision of the department regarding the cost of her conversion, she will not be as well equipped for work as is the *Vestal*.

The final trials of the *Jupiter*, equipped with electrically operated machinery, were completed in August of this year with satisfactory results. Owing to the necessity for her presence in Mexican waters, it has not been possible to subject her to as much work as was contemplated, but it is a pleasure to report that the machinery has thus far responded to every demand that has been made upon it. The work that has been laid out for her should be the means of bringing to light any weakness that may exist in the installation.

Owing to delay on the part of the contractor for the machinery, the new installation of turbine reduction gear machinery in the *Neptune* has not been completed, and there has, therefore, not been any progress in this direction. The machinery is now being installed and she should be in active service again in November.

DESIGN OF MACHINERY.

Plans and specifications were prepared for the machinery of torpedo boat destroyers Nos. 57 to 62, inclusive, for transport No. 1, for supply ship No. 1, and for the colliers *Achilles* and *Ulysses* for the Panama Canal Commission, and specifications for submarine boats Nos. 48 to 51, inclusive (2 sets). Preliminary work was also undertaken on the machinery for battleships Nos. 40, 41, and 42, the *California*, *Idaho*, and *Mississippi*.

Complete working plans of the main engines and their auxiliaries were also prepared for transport No. 1 and supply ship No. 1 and supplied to the navy yards Philadelphia and Boston, respectively. Considerable work has also been done on machinery for small craft, such as oil barges, ash barges, freight lighters, and small craft generally, besides the usual routine work.

NEW CONSTRUCTION.

The machinery of the *New York* was completed at the New York Navy Yard and the vessel is with the fleet. Her completion emphasized the fact that machinery of this character can be quickly constructed at the New York Navy Yard at a cost somewhat less than it can be procured by contract, and that the workmanship is unexcelled.

Mare Island Navy Yard completed the machinery of the river gunboats *Monocacy* and *Palos* well within the estimate, and these vessels are now in service. The final cost of each was little more than two-thirds the amount bid for the construction of one of them by a firm on the Pacific coast, and indicates a high state of efficiency at the Mare Island yard. The Mare Island yard is also building the machinery for the fuel ship *Kanawha*, which is nearing completion.

Work on the Diesel engines of the *Maumee* is proceeding at the New York yard, and it is expected that tests of it will begin early next year.

Other new work is the construction of machinery for fuel oil barges at Norfolk, Mare Island, and Puget Sound, and a freight lighter and a submarine boat at Portsmouth, N. H.

The manufacture of gasoline engines has been continued at Norfolk with most satisfactory results both as to cost and efficiency of operation.

ELECTRICAL WORK.

The work of the electrical division of the bureau has been devoted chiefly to routine work and to the preparation of type plans for new construction and to the revision of plans submitted by contractors. The work of this division along development lines has been hampered by lack of sufficient drafting force.

Improvements have been made in lighting fixtures and in searchlights of vessels in commission as they go to navy yards for overhaul. Investigation has also been made looking to increased efficiency in this important part of the ship's equipment.

In co-operation with the Atlantic Fleet, several changes in visual signaling apparatus have been developed and adopted which greatly increase the efficiency of this method of signaling, while experiments in underwater signaling recently undertaken have pointed the way

to marked efficiency in this line which when fully developed will go far toward relieving the radio apparatus of signaling in the fleet.

The storage-battery equipment of submarines has been much improved and changes made which greatly reduce the probability of explosions in these boats.

RADIOTELEGRAPHY.

Satisfactory progress has been made in the work of modernizing the radio installations of ships. Since the introduction of high frequency and quenched gaps, which rendered all former equipment obsolete, this work has formed the largest single item of expense and effort in connection with radio, though other work of technical investigation and development in connection with the military problems of radio has a greater intrinsic importance. The replacement of the old low-frequency equipment would have been necessitated by reasons of comparative efficiency alone, for recent laws governing commercial installations embody provisions that can hardly be complied with except by modern apparatus. With the old material removed from ships equipped with modern apparatus, it has been possible to equip 10 ships which were without radio and to improve several other installations.

The bureau's new specifications for radio material were issued in January, 1913, and the first deliveries under them were made during the past fiscal year. These specifications were much more exacting than the old ones; in several particulars requirements were made that seemed almost impossibilities, considering the state of the art and from time to time since then; as purchases of apparatus have been made, additional requirements have been added. The full value of this action has become increasingly impressive as the apparatus has been put into service. In this connection it is interesting to note the decrease in cost of radio apparatus. The sets now supplied represent an increase in manufacturing cost and in material supplied of about 40 per cent over the sets purchased under the old specifications, in addition to very notable improvement in efficiency and design, but the purchase prices have shown no advance, and in some cases there has even been a decrease. Against this favorable condition is to be weighed the disadvantage of having in service a multiplicity of types of apparatus made by various manufacturers, which condition not only adds to the expense of maintenance on account of the larger stock of spares it is necessary to carry but also constitutes a serious military weakness. Standardization of radio apparatus is highly important and apparently it is to be accomplished only by Government manufacture.

The use of radio to the limit of its apparent possibilities for military purposes involves technical problems of a difficult order. These problems do not occur in commercial practice, and so long as the Navy depends upon the work of commercial expert investigators these problems will remain unsolved; or, at best, the Navy will remain in the rear of development as established by the practice of other military powers. The obstacle in the way of progress lies in the lack of specialized expert personnel for the necessary development work. Happily this is now in a fair way of being overcome.

Improvement in shore-station installations has kept progress with that of the fleet. Seven stations were equipped with modern apparatus, and many items for extensive betterments in efficiency were carried out at moderate cost throughout the whole chain of stations. The original wooden masts installed at all stations are now approaching the end of their natural life, and as they wear out are being replaced by self-supporting steel towers. An improvement that should go hand in hand with new towers is the provision of fireproof power and operating buildings. The fire hazard is considerable at all radio stations, and especially where oil engines are depended upon for primary power supply. Almost all the stations as originally erected consisted of frame buildings, many of them in isolated positions without other fire protection than that afforded by patent extinguishers in the hands of the station crews.

The stations at Colon and Balboa, at the terminals of the canal, are undergoing complete reconstruction. These stations will handle all the commercial radio communication in connection with the operation of the canal, and no pains have been spared within the bureau's means to provide adequate equipment and a creditable service in keeping with the other parts of this work. These stations will be ready for operation by the end of the calendar year. Their present equipment is adequate for the traffic that must be handled meanwhile.

The construction of the high-powered radio station on the Isthmus has been delayed by delinquency of the contractor for the towers. The buildings, constructed by the Panama Canal Commission, are ready for occupancy, and the electrical equipment was ready for shipment before completion of the contract time. The work is now proceeding more satisfactorily, and the indications are that the station will be in full operation by the end of the calendar year. Proposals for the other high-powered stations authorized on the California coast, in the Hawaiian Islands, and in the Philippines will be advertised about the end of October. The statutory limit of cost for these stations makes it necessary to proceed with the utmost economy, even at the expense of considerable delay. From the amount appropriated in 1912 there remained a balance, after the expenditures necessary for the Darien station, entirely insufficient to cover the cost of one additional station, and additional funds were not made available until the end of the fiscal year. It is expected that a considerable saving may be effected by placing one contract for all the towers for the three stations mentioned, and the principal reason for delay has been the endeavor to accomplish this saving by waiting for the additional funds necessary to proceed with all these stations at once. A difficulty in the way of immediate action, now that funds are available, lies in a legal flaw in the title to the property selected as a site for the California station, the only station of the chain for which private property had to be acquired, but this difficulty, after long negotiations, is now in a fair way of quick settlement.

The stations at Guam and Tutuila, also authorized in connection with the high-powered chain, are not required by the conditions of the problem to be of so powerful a character as the other stations mentioned, and, moreover, the existence of small stations already established at these places, which may be largely used in the final

construction, will probably cause only a small draft against the high-powered station appropriation in connection with these stations. However, even for the four large stations required, the statutory limit of \$1,000,000 is just about half the amount that is being spent by other Governments and commercial concerns to build the same number of stations designed to communicate over like distances. The bureau's plans do not contemplate exceeding the appropriations, and the plans have been drawn as far as possible to insure that there shall be no waste in remodeling the stations if additional funds are provided hereafter. To provide stations that can be regarded as efficiently fulfilling the requirements of the situation, as judged by present-day practice and the possibilities of the art, will require an additional allotment of \$500,000, and even at this figure the total cost will be much less than has been allowed for stations of comparable characteristics erected by other Governments and commercial concerns.

The history of the bureau shows that it has been in the very forefront of progress in recognizing the tendency of the art, in making decisions of radical nature that have influenced world-wide development, and in acting along independent lines. As examples, it is sufficient to cite the high-powered station project, the building of Arlington, the specifications above referred to, the adoption of arc apparatus in the face of adverse reports by the world's greatest authorities, the first discovery of the most efficient method of receiving arc signals, the development of methods of high-frequency measurement, the development of instantaneous wave-changing apparatus, and many other smaller matters of great importance. Not a single action of the bureau in this line has proved to be a mistake or has failed of having its wisdom confirmed by subsequent development. No money has been spent for unnecessary material, and the expenditures for development work have been insignificant compared with what has been accomplished.

ALASKAN COAL.

The expedition to the Matanuska coal field under the technical direction of the Director of the Bureau of Mines completed its work and transported the coal to tidewater, whence it has been shipped to the navy yard, Puget Sound. It was expected that the test of this coal would be completed before the date of this report, but it was necessary to delay it on account of the necessity of sending to Mexican waters all ships suitable for making this test. It is hoped that a vessel will soon be available for the purpose, and that the test will be conclusive as to the merits of the coal from this field.

FUEL OIL.

On account of the increasing price of fuel oil and the necessity of an adequate supply, the following steps were taken during the year, to decrease the Navy's expenditure:

(a) A board was appointed to determine the lowest safe flash point for fuel oil stored and used on board ship.

(b) An investigation was made to determine the feasibility, desirability, and expense of constructing a pipe-line from Oklahoma to some

point on the Gulf of Mexico for the purpose of supplying fuel oil for the Navy.

(c) A study was begun of the condition in and the status of the naval petroleum reserves in California.

The report of the flash-point board resulted in making the specifications for fuel oil less rigid. On account of the new specifications, the increased production in the midcontinent field, and the pipeline investigation, and other probable causes, the contract price for fuel oil for this fiscal year was 61 cents a barrel less than for the preceding year.

TESTS OF SUBAQUEOUS COAL.

The coal stored at New London under the three different conditions, in the open, under cover, and under water, was given the third annual evaporative test. No marked difference in evaporative efficiency was shown between the coal stored under different conditions, and no conclusive evidence developed as to the best method of storing coal.

INSPECTION OF MATERIAL.

The work of this division increased materially during the year and imposed a heavier task on the inspectors in the field, which has been performed with marked efficiency. The principal cause of this increased work lies in the practice of purchasing material f. o. b. works, instead of at the point of delivery, which practice requires that inspection of much material which had heretofore been inspected on delivery be made before shipment. The increase in the quantity of material inspected is apparent from the following tabular statement for 1913 and 1914.

Comparison of the inspection work performed during the fiscal year ending June 30, 1914, with that of the preceding fiscal year, is indicated in the table below:

Bureau for which inspection was made by inspectors of engineering material.	Pounds inspected and passed.	
	1913	1914
Steam Engineering.....	27,164,464	37,264,902
Yards and Docks.....	27,787,697	34,390,921
Supplies and Accounts.....	1,974,131	610,848
Construction and Repair.....	325,775	338,138
Ordnance.....	809,949	1,964,125
Navigation.....	6,670	3,640
Medicine and Surgery.....	10,725	.....
	58,079,411	74,572,574

Number of—	1913	1914
Districts.....	8	8
Officers in charge.....	7	7
Civilian assistants.....	29	30
Warrant officers.....	1	2
Chemists (Pittsburgh, Pa.).....	1	1
Manufacturing establishments at which inspections have been made.....	626	788

In addition to the material inspected by inspectors of engineering, there was inspected by the inspectors of machinery in 1913, 4,659,908 pounds; and in 1914, 5,686,218 pounds.

The total weight of material inspected and accepted by inspectors of engineering material in 1913 was 58,079,411 pounds and in 1914 was 74,572,574 pounds.

Material rejected by inspectors of engineering material in 1913 was 3,143,981 pounds, and in 1914 was 3,241,818 pounds.

Cost of inspection per ton in 1913 was \$3.22 and in 1914 was \$2.55.

Material inspected in each district.

	Pounds accepted.	Pounds rejected.	Cost of inspection.
South Bethlehem.....	5,810,910.00	380,242	\$3,668.65
Pittsburgh.....	39,333,541.00	2,138,055	29,823.85
Philadelphia.....	13,985,126.00	398,718	9,111.43
Schenectady.....	2,085,065.00	.....	1,355.63
Brooklyn.....	4,278,630.00	115,741	20,237.88
Hartford.....	1,975,680.00	86,979	6,679.18
Boston.....	2,326,316.00	13,331	10,982.84
Chester.....	4,777,316.00	108,752	3,052.12
Total.....	74,572,574.00	3,241,818	84,911.58
Quincy.....	409,436.00	.....	.....
Cramp's.....	276,940.50	.....	.....
Bayonne.....	4,176,032.00	.....	.....
Camden.....	583,483.25	.....	.....
Bath.....	239,893.00	4,120	.....
Newport News.....	424.00	.....	.....
Total.....	5,686,218.75	4,120	.....

MACHINERY OF VESSELS UNDER CONSTRUCTION.

The work is progressing in a regular manner under the supervision of the inspectors of machinery, but, as the character of the work is becoming more varied and extensive, the necessity for a larger inspection force is generally apparent. While the present force is able to carry on the work with a fair degree of success, much better results would follow if a more adequate force were provided, both at the offices of inspectors of machinery and at the bureau.

The accompanying tables give the results of trials of new vessels delivered during the year and the condition of work on those under construction.

R. S. GRIFFIN.

The SECRETARY OF THE NAVY.

Vessels under construction.

No.	Vessel.	Building yard.	N'umber of shafts.	Speed.	Percentage machinery completed.		Date of con-tract.	Contract data of delivery.
					July 1, 1913.	July 1, 1914.		
Battleships:								
36	Nevada.....	Fore River Shipbuilding Co.....	2	<i>Knots.</i> 20.50	43.45	78.23	Jan. 22, 1912	Jan. 22, 1915
37	Oklahoma.....	New York Shipbuilding Co.....	2	20.50	36.49	78.38	.....do.....	Do.
38	Pennsylvania.....	Newport News Shipbuilding Co.....	4	21.00	.....	33.28	Feb. 28, 1913	Feb. 28, 1916
39	Arizona.....	Navy yard, N. Y.....	4	21.00	.....	10.71	(¹)	(¹)
Destroyers:								
45	Downes.....	New York Shipbuilding Co.....	2	29.00	66.30	96.28	Sept. 8, 1911	Sept. 8, 1913
51	O'Brien.....	Wm. Cramp & Sons.....	2	29.00	5.59	76.11	Dec. 7, 1912	Nov. 27, 1914
52	Nicholson.....	.....do.....	2	29.00	5.59	75.10	.....do.....	Dec. 7, 1914
53	Winslow.....	.....do.....	2	29.00	7.57	71.35	.....do.....	Dec. 11, 1912
55	Cushing.....	Fore River Shipbuilding Co.....	2	29.00	1.90	68.10	Dec. 11, 1912	Dec. 16, 1914
56	Frisson.....	New York Shipbuilding Co.....	2	29.00	.....	66.03	Dec. 16, 1912	Dec. 16, 1914
57	Tucker.....	Fore River Shipbuilding Co.....	2	29.50	.....	19.07	Sept. 12, 1913	Sept. 27, 1915
58	Conyngham.....	Wm. Cramp & Sons.....	2	29.50	.....	14.60	Oct. 2, 1913	Sept. 27, 1915
59	Porter.....	.....do.....	2	29.50	.....	13.57	.....do.....	Oct. 2, 1915
60	Wadsworth.....	Bath Iron Works.....	2	30.00	.....	43.57	Oct. 15, 1913	Oct. 15, 1915
61	Jacob Jones.....	New York Shipbuilding Co.....	2	29.50	.....	20.88	.....do.....	Do.
62	Wainwright.....	.....do.....	2	29.50	.....	20.98	.....do.....	Do.
Fuel ships:								
13	Kanawha.....	Navy yard, Mare Island.....	2	14.00	2.30	48.90	(¹)	(¹)
14	Maumee.....	.....do.....	2	14.00	.....	15.00	(¹)	(¹)
Submarines:								
31	G-3.....	Navy yard, N. Y.....	2	14.00	25.77	82.00	May 31, 1911	Aug. 31, 1913
34	K-3.....	Union Iron Works.....	2	14.00	86.37	100.00	.....do.....	Do.
35	K-4.....	Seattle Construction Co.....	2	14.00	87.00	100.00	Oct. 27, 1911	Oct. 27, 1913
36	K-5.....	Fore River Shipbuilding Co.....	2	14.00	76.83	99.26	.....do.....	Nov. 27, 1913
37	K-6.....	.....do.....	2	14.00	75.72	99.05	.....do.....	Dec. 27, 1913
38	K-7.....	Union Iron Works.....	2	14.00	55.81	99.15	.....do.....	Do.
39	K-8.....	.....do.....	2	14.00	55.45	94.23	.....do.....	Dec. 1, 1914
40	L-1.....	Fore River Shipbuilding Co.....	2	14.00	.....	81.45	Feb. 1, 1913	Jan. 1, 1914
41	L-2.....	.....do.....	2	14.00	.....	80.64	.....do.....	Jan. 1, 1914
42	L-3.....	.....do.....	2	14.00	.....	61.81	.....do.....	Feb. 1, 1915
43	L-4.....	.....do.....	2	14.00	.....	59.72	.....do.....	Mar. 1, 1915
44	L-5.....	Lake Torpedo Boat Co.....	2	14.00	.....	.....	Apr. 24, 1914	Apr. 24, 1916
45	L-6.....	.....do.....	2	14.00	.....	.....	.....do.....	Do.
46	L-7.....	.....do.....	2	14.00	.....	.....	.....do.....	May 24, 1916
47	M-1.....	Fore River Shipbuilding Co.....	2	14.00	.....	71.94	Feb. 4, 1913	Apr. 4, 1915

48	1-8	2	14.00	(1)	Mar. 14, 1914	Mar. 14, 1916
49	L-9	2	14.00	7.61	do.	Do.
50	L-10	2	14.00	7.61	do.	Do.
	Submarine tenders:					
1	Fulton	1	12.25	13.50	June 19, 1912	June 19, 1914
2	Bussnell	1	14.00	20.93	June 30, 1913	Mar. 31, 1915
2	Destroyer tender:					
	Meville	1	15.00	22.36	June 20, 1913	June 20, 1915
	Transport:					
1	Supply ship:	2	14.00	(1)	(1)	
1	Tugs:	2	14.00	(1)	(1)	
	Arapaho	1		93.00	June 30, 1913	June 30, 1914
	Mohave	1		87.00	do.	Do.
	Tillamook	1		79.00	do.	Do.

! Building by Government.

New vessels delivered during year.

Number.	Vessel.	Building yard.	Number of shafts.	Speed designed.	Speed on trial.	L. H. P. or S. H. P.	Percentage completion of machinery July 1, 1913.	Date of contract.	Date of delivery.
34	Battleships: New York.	Navy yard, New York.	2	21.00	(¹)	29,338.0	78.49	Dec. 17, 1910	Mar. 12, 1914
35	Texas.	Newport News Shipbuilding Co.	2	21.00	21.060	15,307.0	86.50	Sept. 6, 1911	Aug. 8, 1913
43	Destroyers: Cassin.	Bath Iron Works.	2	29.00	30.137	16,335.0	98.78	do.	Sept. 19, 1913
44	Cummings.	do.	2	29.00	30.574	16,350.0	98.31	do.	Aug. 30, 1913
46	Duncan.	Fore River Shipbuilding Co.	2	29.00	29.140	16,350.0	96.27	Sept. 7, 1911	Jan. 17, 1914
47	Aylwin.	Wm. Cramp & Sons.	2	29.50	29.959	16,350.0	95.71	do.	Dec. 20, 1913
48	Parker.	do.	2	29.50	29.547	16,500.0	93.43	do.	Jan. 20, 1914
49	Benham.	do.	2	29.50	29.594	17,251.0	92.68	do.	Mar. 26, 1914
50	Balch.	do.	2	29.50	29.618	16,974.0	91.01	do.	June 16, 1914
54	McDougal.	Bath Iron Works.	2	30.50	30.697	16,974.0	23.47	Dec. 16, 1911	Jan. 22, 1914
26	Submarines: G-4.	American Laurenti Co. (Cramps).	2	14.00	.....	.....	88.76	Apr. 24, 1909	Nov. 26, 1913
27	G-2.	Lake Torpedo Boat Co.	2	14.50	.....	.....	98.10	Apr. 21, 1909	Nov. 26, 1913
28	H-1.	Electric Boat Co. (Union Iron Works).	2	14.00	14.040	.....	99.21	Aug. 10, 1910	Nov. 26, 1913
29	H-2.	do.	2	14.00	14.110	.....	99.13	do.	Do
30	H-3.	do.	2	14.00	14.180	.....	96.40	do.	Jan. 16, 1914
19	Gunboats: Sacramento.	Electric Boat Co. (Seattle Construction Co.).	1	12.50	12.781	1,022.0	31.83	Sept. 9, 1912	Apr. 26, 1914
20	Monocacy.	Wm. Cramp & Sons.	2	13.25	.....	.....	64.40	(²)	.....
16	Palos.	Navy yard, Mare Island (assembled at Shanghai, China).	2	13.25	.....	.....	64.40	(²)	.....
9	Fuel ships: Proteus.	do.	2	14.00	14.057	7,207.0	99.00	Aug. 29, 1911	July 6, 1913
10	Nereus.	do.	2	14.00	14.980	6,904.0	82.60	do.	Sept. 10, 1913
3	Jupiter.	Navy yard, Mare Island.	2	14.00	14.990	7,151.9	99.10	(²)	.....

¹ No trial.

² Government built.

³ Turned over to Government crew for trials; contractors still responsible.

⁴ Taken over by Government to be completed.

REPORT OF PAYMASTER GENERAL OF THE NAVY, CHIEF OF BUREAU OF SUPPLIES AND ACCOUNTS.

NAVY DEPARTMENT,
BUREAU OF SUPPLIES AND ACCOUNTS,
Washington, D. C., October 5, 1914.

To: The Secretary of the Navy.

Subject: Annual report.

1. Herewith submitted is the annual report of the Bureau of Supplies and Accounts for the year ended June 30, 1914, prepared in pursuance of my following letter 180-2, of August 19, 1914, which received the department's approval:

"It is proposed to confine the report now in course of preparation to the following statements and tables:

Statement A, appropriations and funds.

Statement B, Table 1, expenditures by labor, indirect, material, and public bills by appropriations and titles, covering all expenditures under the Naval Establishment. Table 2, expenditures for construction of new vessels. Table 3, expenditures for maintaining ships in commission. Table 4, expenditures for repairs to vessels. Table 5, expenditures for repairs to equipage of ships in commission. Table 6, expenditures for maintenance and permanent improvements at the several navy yards and stations.

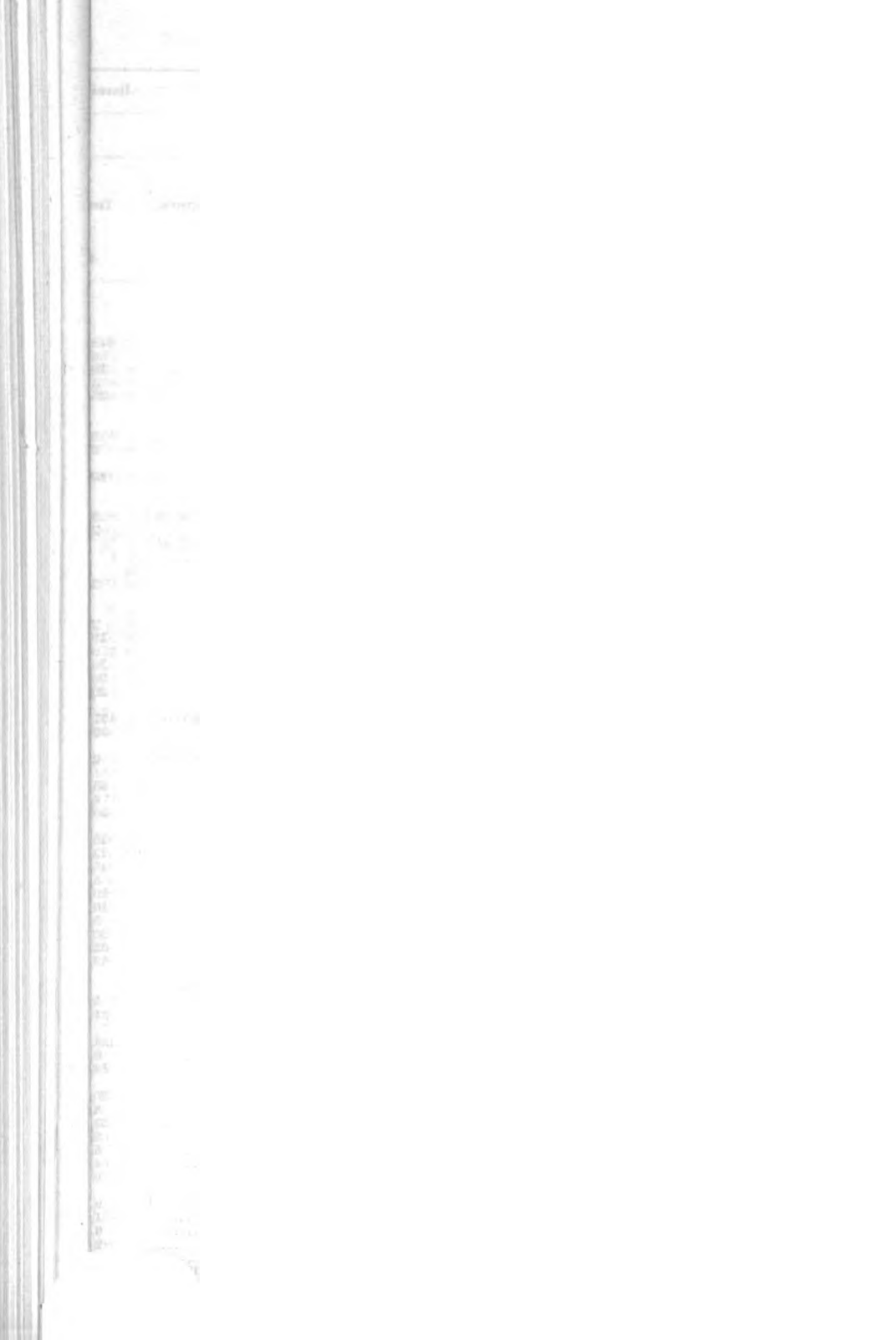
Statement showing value of stores on hand at the several navy yards and stations and on ships in commission.

Statement of public sales of condemned Government property."

2. The principal items in these tables show:

Amount drawn from the Treasury.....	\$139, 707, 021. 48
Expenditures on account of construction of new ships, including labor and material.....	26, 135, 389. 42
Cost of repairs to ships and equipage at home and abroad.....	7, 802, 229. 58
Cost of maintaining ships in commission (other than receiving ships), including pay of officers and men, subsistence, and incidental expenses.....	39, 435, 733. 13
Cost of maintaining receiving, prison, and station ships, including pay of officers and enlisted men, subsistence, and incidental expenses.....	6, 178, 747. 43
Cost of maintaining navy yards and stations.....	13, 559, 825. 53

SAMUEL MCGOWAN.



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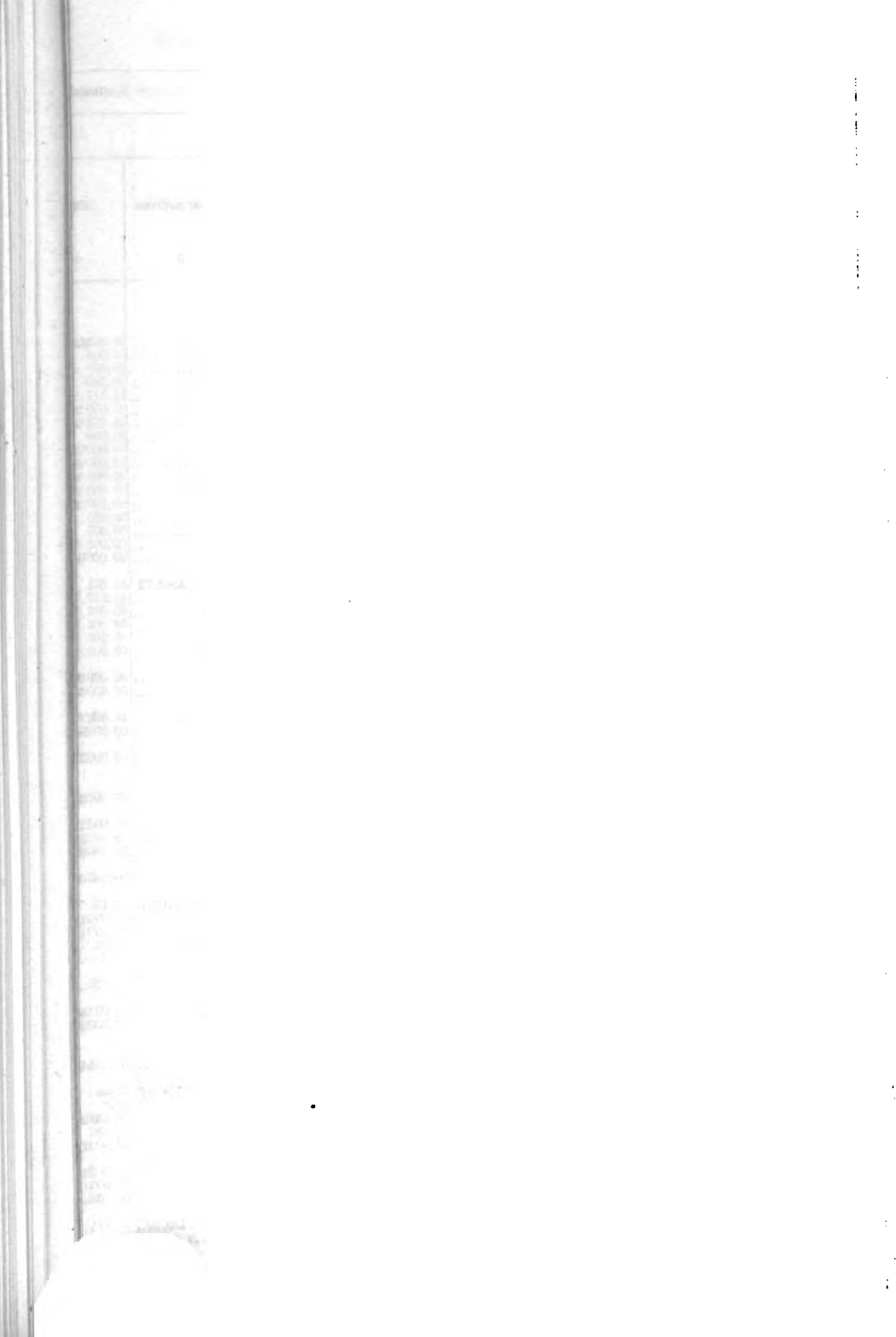
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STATEMENT A—Continued.

TABLE 2.—Statement showing total expenditures for the Naval Establishment.

Charged to expenditure titles (see Statement B, Table 1).....	\$103,166,271.13
OTHER EXPENDITURES:	
Marine Corps, public vouchers and material.....	\$3,576,916.26
Marine Corps, pay.....	3,224,649.07
Stores, cost of commission of vessels—	
Titles "B" and "Y".....	\$10,429,242.09
Provisions.....	6,706,955.73
Medical stores.....	99,970.61
Stores, miscellaneous—	
Clothing and small stores.....	16,240,168.33
Provisions.....	43,185.49
Medical stores.....	452,092.06
	166,721.81
	661,999.35
	23,713,633.01
LOSSES IN STORES:	
Naval supply account, appraisal.....	169,014.36
Ordnance account, appraisal.....	1,960,862.23
Survey account, appraisal.....	538,799.62
Reserve account, inventory.....	31.11
Condemned.....	647,743.27
Clothing and small stores.....	81,113.18
Provisions and ships' stores.....	18,117.90
Marine Corps property, condemned.....	261,987.77
Medical stores.....	858.36
Total loss.....	3,678,837.80
Less gains in stores:	
Naval supply account, inventory.....	\$26,445.80
Ordnance account, inventory.....	417,437.47
Survey account, inventory.....	9,644.53
Reserve account, appraisal.....	6,919.31
Material returned to store from plant and salvage.....	346,591.74
	836,928.55
	2,842,599.26
	6,374,122.96
Reduction in equipment on board ships due to inventory.....	8,166,722.20
Less sundry credits on rolls.....	136,046,626.34
	1,124,708.61
Total expenditures.....	138,920,919.78

	On hand July 1, 1913.	On hand June 30, 1914.	Increase.	Decrease.
INCREASES AND DECREASES IN STORES ACCOUNTS:				
Naval supply account.....	\$22,565,405.87	\$21,882,470.94	.....	\$682,934.93
Ordnance account.....	55,625,600.59	58,508,233.78	.....	.....
Survey account.....	920,207.45	228,167.46	\$2,882,573.19	602,039.90
Reserve account.....	34,945.93	263,819.23	228,873.30	.....
In custody of other departments.....	128,468.88	212,221.70	83,752.82	.....
Equipment and stores on board ships.....	89,075,395.07	88,799,288.63	.....	276,106.44
Clothing and small stores.....	3,267,634.82	3,077,797.06	.....	189,837.76
Provisions and ships' stores.....	1,866,661.64	2,159,017.31	292,355.67	.....
Medical stores.....	1,185,731.32	225,716.36	39,985.04	.....
Clothing and property of the Marine Corps.....	3,395,970.88	4,111,644.82	715,773.94	.....
Provisions, naval auxiliaries.....	12,408.04	12,805.80	397.76	.....
Clothing and small stores, condemned to be sold.....	7,502.54	37,749.69	30,247.15	.....
Transfers between the naval supply account and provisions and clothing, in transit.....	13,577.09	20,395.09	6,818.00	.....
Work in progress, naval supply account.....	1,008,217.17	1,185,347.13	177,129.96	.....
Work in progress, ordnance account.....	4,889,008.02	5,216,540.59	327,532.57	.....
Work in progress, clothing factories.....	204,505.11	197,466.17	.....	7,038.94
	183,201,300.42	186,138,681.76	4,785,439.40	*1,847,958.06

Net increase in stores accounts.....

\$2,937,381.34

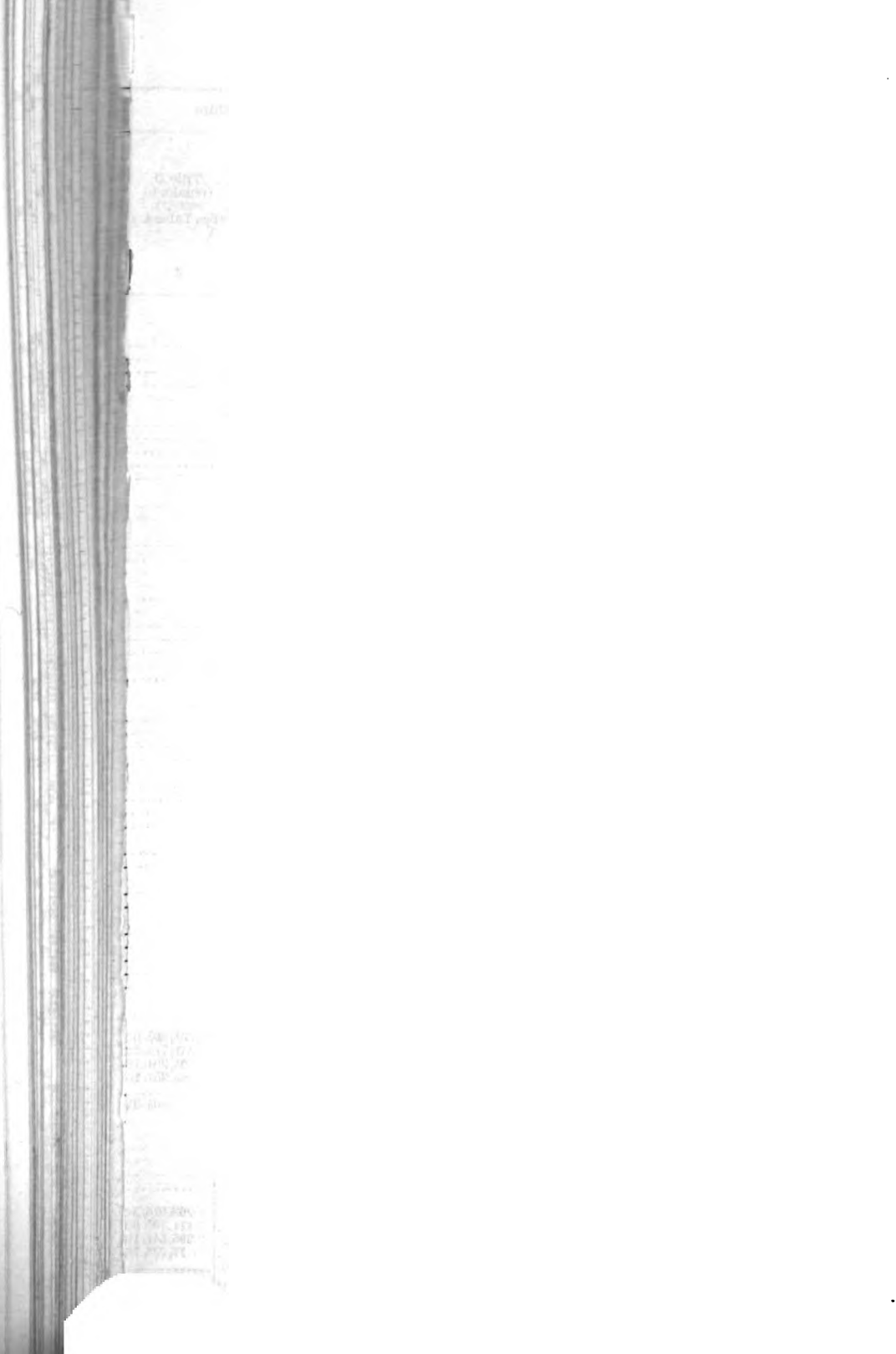
Total expenditures for the Naval Establishment.....

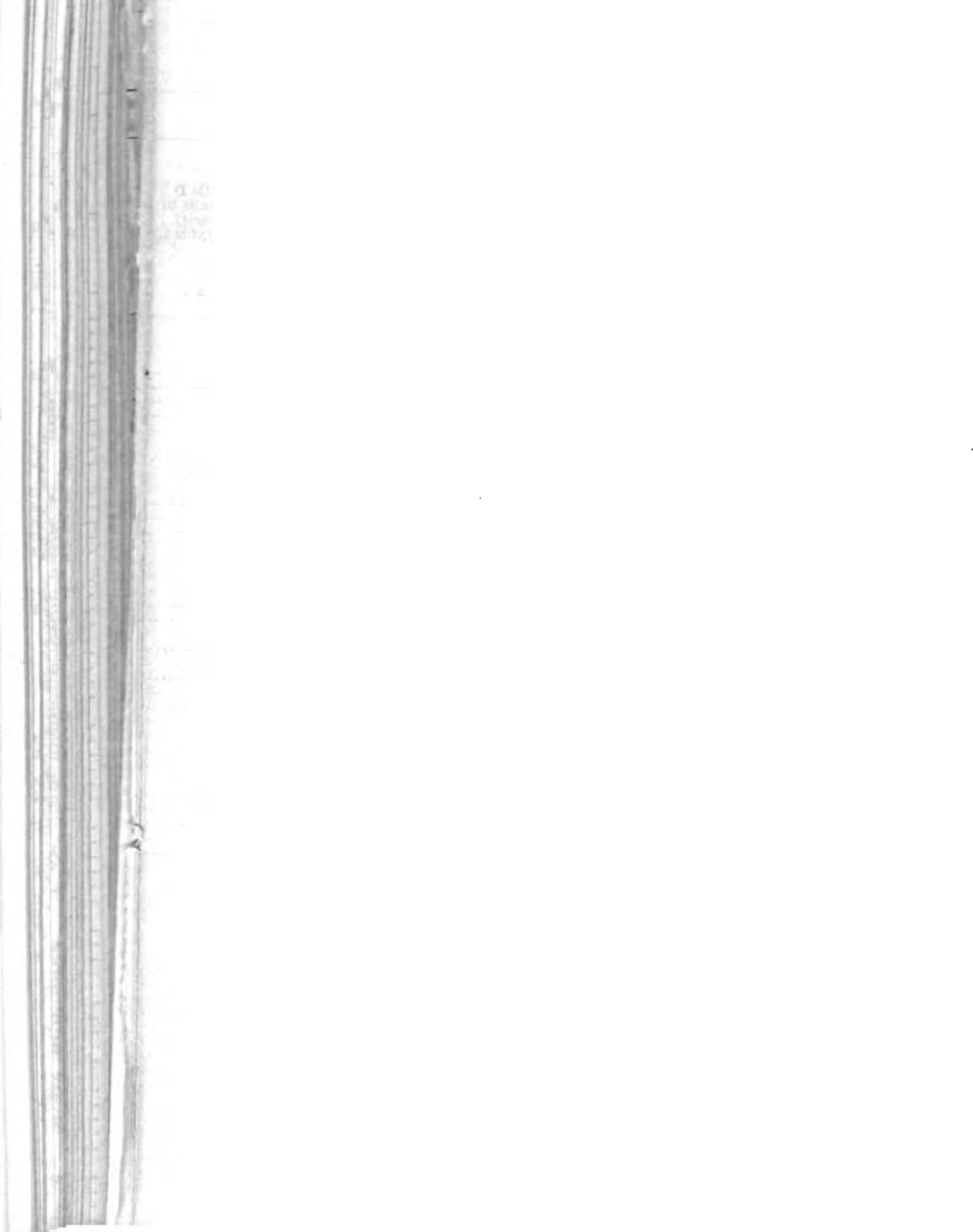
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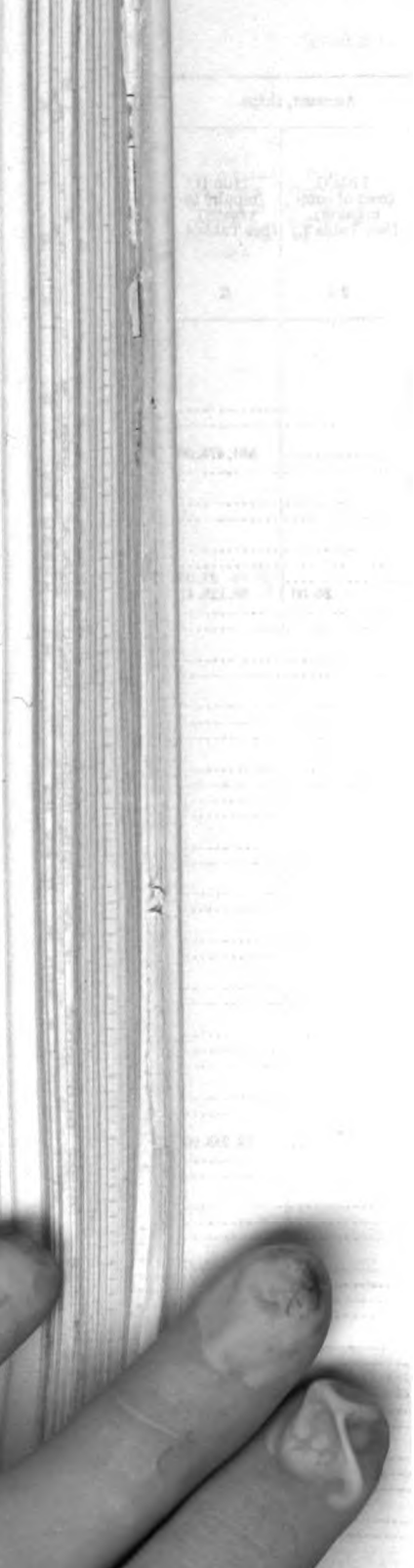
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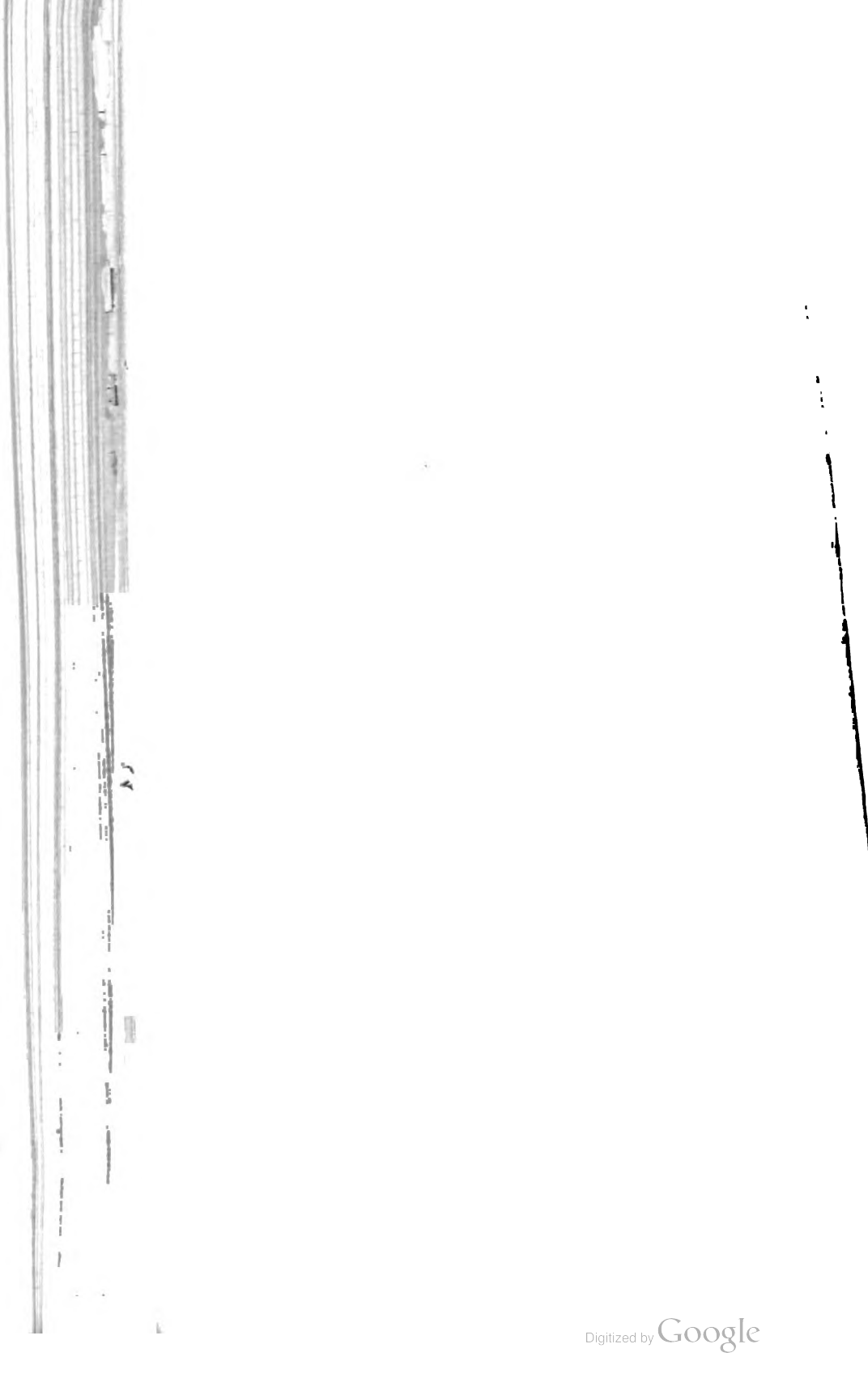
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STATEMENT B—Continued.

TABLE 2.—Statement showing expenditures for construction of new vessels.

Ships.	Labor.	Indirect.	Material.	Public bills.	Total.
<i>Battleships, first line.</i>					
Arizona.....	\$232,718.64	\$96,448.17	\$269,889.49	\$925,654.83	\$1,544,711.13
Arkansas.....	11,694.26	4,694.85	12,787.30	121,887.00	150,963.41
Florida.....	18,990.33	5,435.86	6,215.50	.....	28,641.69
Nevada.....	18,378.97	4,253.85	40,782.31	3,715,510.50	3,778,930.63
New York.....	608,792.79	238,037.14	832,189.64	226,642.77	1,902,662.34
Oklahoma.....	18,463.88	4,288.26	40,779.44	2,661,680.37	2,748,211.95
Pennsylvania.....	.....	.....	.....	4,432,518.28	4,432,518.28
Texas.....	86,719.90	31,620.04	60,553.84	728,313.11	907,206.89
Utah.....	.....78	.....1.85	1,941.99	2,558.65	4,500.17
Wyoming.....	23,114.78	8,529.99	18,845.98	114,848.38	165,338.83
<i>Battleships, second line.</i>					
Kansas.....	.....	.....	.....	7,611.50	7,611.50
<i>Armored cruisers.</i>					
Tennessee.....	.....	.....	.....	10,216.65	10,216.65
Washington.....	.....	.....	.....	11,123.00	11,123.00
<i>Destroyers.</i>					
Aylwin.....	2,433.49	1,275.92	4,647.43	48,905.71	57,262.55
Balch.....	4,326.51	1,566.32	5,326.24	52,433.24	63,652.31
Beale.....	256.96	174.98	40.60	4,016.49	4,490.02
Benham.....	4,423.25	1,509.64	4,562.98	49,325.71	59,811.58
Cassin.....	3,806.60	2,225.70	1,662.85	79,378.78	87,073.93
Corynham.....	.....	.....	.....	88,100.00	88,100.00
Cummings.....	3,015.42	1,616.63	1,300.73	77,990.44	83,923.12
Cushing.....	.....	.....	.....	427,250.00	427,250.00
Downes.....	467.69	192.09	3,702.38	226,750.00	231,112.16
Drayton.....	58.94	22.77	15.13	1,624.00	1,720.84
Duncan.....	13,135.17	6,327.78	3,833.89	58,756.16	82,053.00
Ericsson.....	.....	.....	.....	567,775.00	567,775.00
Fanning.....	.....	.....	.....	2,442.27	2,442.46
Henley.....	4,388.62	1,293.65	1,649.79	15,321.07	22,653.13
Jacob Jones.....	.....	.....	.....	82,500.00	82,500.00
Jarvis.....	351.17	263.86	506.78	22,368.75	23,489.56
Jenkins.....	.....	.....	1,101.35	.....	1,101.35
Jonett.....	1,745.62	1,342.34	483.23	.....	3,571.19
McDougal.....	734.93	296.51	356.71	607,500.00	608,888.15
Mayrant.....	68.84	21.83	10.85	1,106.36	1,207.87
Nicholson.....	.....	.....	.....	547,300.00	547,300.00
O'Brien.....	.....	.....	.....	547,300.00	547,300.00
Parker.....	4,289.49	1,545.11	5,481.32	49,025.71	60,321.63
Paulding.....	.....	.....	.....	1,624.00	1,624.00
Perkins.....	.....	.....	2.76	.....	2.76
Porter.....	.....	.....	.....	88,100.00	88,100.00
Sterett.....	83.54	28.05	11.35	.....	122.94
Trippes.....	.....	.....	.....	1,627.47	1,627.47
Tucker.....	.....	.....	.....	129,150.00	129,150.00
Wadsworth.....	.....	.....	.....	265,200.00	265,200.00
Wainwright.....	.....	.....	.....	82,500.00	82,500.00
Walke.....	.....	.....	.....	1,711.68	1,711.68
Winalow.....	.....	.....	.....	547,300.00	547,300.00
<i>Submarines.</i>					
E-1.....	56.28	32.37	10.33	.....	98.98
E-2.....	3.00	.....	8.18	3,616.76	3,627.94
F-1.....	473.04	223.64	173.45	.....	870.13
F-2.....	461.86	219.40	170.31	.....	851.57
F-3.....	481.05	231.61	166.89	.....	879.55
F-4.....	781.35	362.60	183.34	15,005.07	16,332.36
G-1.....	2,237.09	696.91	467.46	10,178.76	13,480.22
G-2.....	7,330.85	1,308.08	2,461.72	54,462.84	65,563.49
G-3.....	31,625.16	4,755.65	76,349.95	99,576.03	212,206.79
G-4.....	2,572.80	1,142.53	15,610.11	43,750.00	63,075.44
H-1.....	304.64	148.18	1,570.95	42,983.49	45,007.26
H-2.....	403.20	186.99	1,509.91	43,064.44	45,224.54
H-3.....	525.30	221.13	4,737.94	44,328.94	49,812.31
K-1.....	1,991.14	1,025.51	1,897.83	80,297.66	85,212.14
K-2.....	1,925.07	1,275.17	1,973.91	78,556.67	85,730.82
K-3.....	.....	.....	.....	61,654.11	61,654.11
K-4.....	.....	.....	.....	88,827.89	88,827.89
K-5.....	.....	.....	.....	126,311.00	126,311.00
K-6.....	.....	.....	.....	126,819.74	126,819.74

STATEMENT B—Continued.

TABLE 2.—Statement showing expenditures for construction of new vessels—Continued.

Ships.	Labor.	Indirect.	Material.	Public bills.	Total.
<i>Submarines—Continued.</i>					
K-7.....				\$160,798.73	\$160,798.73
K-8.....				186,898.73	186,898.73
L-1.....				267,000.00	267,000.00
L-2.....				267,000.00	267,000.00
L-3.....				213,600.00	213,600.00
L-4.....				186,900.00	186,900.00
L-5.....				53,500.00	53,500.00
L-6.....				28,000.00	28,000.00
L-7.....				28,000.00	28,000.00
L-9.....				26,750.00	26,750.00
L-10.....				26,750.00	26,750.00
M-1.....				276,750.00	276,750.00
<i>Transports.</i>					
Transport No. 1.....	\$513.17	\$206.39	\$1,099.43		1,818.99
<i>Gunboats.</i>					
Monocacy.....	18,624.72	8,532.75	30,500.41	10,249.40	67,907.28
Palos.....	18,644.69	8,540.99	30,494.44	10,265.99	67,975.11
Sacramento.....	1,291.12	489.12	565.45	374,480.00	376,825.69
<i>Supply ships.</i>					
Supply Ship No. 1.....	261.02	8.30	51.10		320.42
<i>Fuel ships.</i>					
Jason.....	2,125.92	1,356.64	4,507.02	91,184.56	99,174.14
Jupiter.....	18,977.66	8,307.15	15,638.63	18,144.00	61,067.44
Kanawha.....	204,792.20	91,850.44	301,784.05		598,426.69
Maumee.....	30,280.56	15,541.17	123,908.32		169,730.05
Neptune.....	9,427.64	5,961.93	3,475.65		18,865.22
Nereus.....	4,666.68	2,656.65	5,050.13	145,225.75	157,599.21
Orion.....	178.34	102.77	343.60	21.45	646.16
Proteus.....	7,044.38	4,169.84	2,473.92	38,213.25	51,901.39
<i>Tugs.</i>					
Ontario.....	7,923.08	3,122.08	3,509.05	10,679.00	25,233.16
Sonoma.....	2,239.55	737.21	1,478.46	10,554.00	15,009.22
<i>Tenders to torpedo vessels.</i>					
Bushnell.....				280,708.50	280,708.50
Fulton.....			599.84	320,404.50	321,004.34
Melville.....				458,557.00	458,557.00
Total.....	1,525,503.03	576,318.13	1,971,052.12	22,062,516.14	26,135,389.42

STATEMENT B—Continued.
TABLE 3.—Statement showing expenditures for maintaining ships in commission.

Ships.	Title C.				Total cost of commission.	Title D, hull and machinery.	Title E, repairs, equipment.	Total cost of maintenance of ships.
	Accrued pay.	Incidental expenses (public bills).	Subsistence (including commuted rations).	Stores issued.				
<i>Battleships, first line.</i>								
Arkansas.....	\$544,233.74	\$642.35	\$119,754.25	\$161,640.66	\$326,270.90	\$65,333.33	\$6,391.03	\$398,004.26
Delaware.....	463,468.13	331.83	101,698.23	161,768.78	717,291.97	155,604.87	7,187.96	890,084.80
Florida.....	491,866.98	1,265.47	96,371.73	134,371.65	715,876.83	9,913.02	7,565.15	832,994.07
Michigan.....	405,973.75	1,845.78	88,028.15	124,448.46	630,266.14	10,928.94	1,928.94	642,138.10
New York.....	131,940.87	96.71	26,782.91	28,373.03	187,194.61	155.58	640.58	187,992.67
North Dakota.....	430,128.35	74.13	99,406.21	130,634.03	669,132.72	247,033.58	7,966.43	924,163.03
South Carolina.....	402,561.31	1,074.20	88,864.06	118,728.47	606,238.05	180,456.66	7,870.64	803,566.35
Texas.....	480,341.29	243.04	106,652.83	163,661.07	740,908.22	30,216.88	1,962.33	773,076.37
Utah.....	157,046.10	265.80	34,865.85	4,411.35	196,619.10	2,705.45	9,180.26	200,276.88
Wyoming.....	603,176.80	1,265.87	124,979.00	196,241.58	926,653.25	51,004.94		986,658.45
<i>Battleships, second line.</i>								
Alabama.....	128,265.81	909.06	20,745.31	38,088.69	188,009.87	13,658.36	531.22	202,246.45
Connecticut.....	479,980.27	1,173.03	107,745.70	171,333.91	790,133.91	138,965.82	6,454.11	905,638.84
Georgia.....	437,313.46	740.08	96,477.05	162,505.29	690,035.89	184,791.04	9,145.61	892,972.54
Idaho.....	276,701.19	723.68	59,307.23	110,917.33	447,649.43	78,078.17	5,320.79	531,045.88
Illinois.....	198,987.04	613.06	35,847.15	69,878.80	275,394.04	7,265.47	1,041.00	283,692.61
Indiana.....	38,263.73	3.04	5,910.99	22,835.21	67,012.97	4,775.77	134.45	71,933.19
Iowa.....	68,546.05	32.66	13,794.37	26,489.34	107,832.43	5,878.63	287.49	113,993.64
Kansas.....	465,775.00	976.52	104,665.05	154,669.69	726,943.89	94,315.71	4,265.54	894,545.14
Kearney.....	69,010.31	56.06	9,146.81	29,660.86	107,874.03	15,034.56	4,618.76	123,537.35
Kentucky.....	60,351.29	25.25	13,592.49	34,419.90	108,388.93	3,890.99	372.21	112,152.13
Louisiana.....	463,650.71	1,464.54	103,847.36	159,919.40	728,412.01	98,381.98	3,872.37	830,665.36
Maine.....	126,191.19	226.17	55,615.26	46,917.04	227,849.66	2,964.61	1,399.05	235,126.73
Massachusetts.....	30,013.96	22.19	5,671.31	26,884.82	62,592.28	2,964.61	940.49	66,487.38
Minnesota.....	479,921.27	453.92	96,734.87	144,354.85	721,464.91	9,780.83	5,961.03	874,640.78
Mississippi.....	171,061.65	573.17	34,830.87	67,472.09	273,937.78	7,180.24	3,002.08	284,621.69
Missouri.....	160,247.69	304.78	33,549.79	69,644.27	263,746.53	48,346.71	3,433.18	315,533.42
Nebraska.....	437,628.53	786.95	104,404.92	179,888.29	722,411.69	65,436.88	3,833.99	788,702.26
New Hampshire.....	461,446.73	186.09	102,625.95	248,496.81	812,757.58	22,174.40	2,276.52	837,208.50
New Jersey.....	429,591.28	544.12	93,555.00	126,154.13	646,845.13	99,692.76	4,176.85	752,714.74
New York.....	337,777.78	1,946.76	80,867.39	109,091.53	529,688.46	31,708.11	488.26	561,879.83
Ohio.....	33,160.07		179.70	22,044.37	55,384.14	3,037.94	901.90	60,322.98
Oregon.....	450,922.11	921.40	104,963.86	173,066.77	729,632.14	81,576.18	8,109.19	819,318.51
Rhode Island.....	447,703.47	1,296.01	86,789.17	119,038.77	657,830.43	283,897.85	9,768.76	931,487.03
Vermont.....	438,861.44	920.17	96,420.50	138,500.63	674,711.73	186,768.79	4,015.24	815,480.76
Virginia.....	116,194.47	61.64	17,066.38	30,202.61	163,465.10	4,776.14	966.36	169,241.58
Wisconsin.....								

STATEMENT B—Continued.

TABLE 3.—Statement showing expenditures for maintaining ships in commission—Continued.

Ships.	Title C.				Total cost of commission.	Title D. hull and machinery.	Title P. repairs, equipage.	Total cost of maintenance of ships.
	Accrued pay.	Incidental expenses (public bills).	Subsistence (including commuted rations).	Stores issued.				
<i>Armored cruisers.</i>								
California.....	\$462,300.53	\$1,105.14	\$99,350.30	\$212,474.96	\$775,230.93	\$37,080.46	\$4,047.06	\$816,368.37
Colorado.....	154,759.50	259.79	33,465.47	40,423.14	248,906.90	10,815.81	10,815.16	694,537.87
Maryland.....	425,777.87	705.97	97,759.45	182,137.06	704,490.35	76,319.73	9,004.63	789,804.70
Montana.....	208,946.48	1,063.74	41,494.18	85,008.93	337,083.33	57,947.44	3,073.65	388,104.42
North Carolina.....	142,407.89	221.90	51,499.32	50,827.48	244,866.69	24,064.53	3,681.91	272,613.08
Pittsburgh.....	399,050.87	751.50	85,843.62	106,537.75	623,183.74	257,739.13	2,445.06	892,367.93
South Dakota.....	334,162.82	424.26	90,388.32	137,180.49	562,156.91	40,197.79	5,678.26	628,031.96
Tennessee.....	173,803.49	779.04	42,703.17	71,398.89	288,698.49	75,302.69	5,634.26	399,622.44
Washington.....	198,261.45	575.39	104,269.96	67,772.01	365,898.80	24,253.99	4,073.26	394,227.03
West Virginia.....	187,420.52	248.79	50,118.06	102,135.64	339,923.03	49,212.51	5,326.11	394,460.65
<i>Cruisers, first class.</i>								
Brooklyn.....	14,780.02	.....	310.30	4,550.53	19,640.75	276,577.47	126.90	296,345.12
Charleston.....	106,668.28	220.45	58,983.39	60,128.96	219,853.10	18,745.56	4,674.56	243,263.21
Milwaukee.....	47,049.48	12.35	2,763.73	26,226.01	76,108.57	38,414.16	1,494.72	116,012.46
Saratoga.....	331,033.49	5,606.28	70,064.66	136,063.86	541,663.26	19,460.14	1,662.61	562,776.03
St. Louis.....	307,863.53	249.79	30,221.86	68,542.93	266,823.61	27,971.09	1,636.93	296,423.53
<i>Cruisers, second class.</i>								
Chicago.....	35,586.92	.....	6,672.24	19,273.44	61,533.60	1,817.55	711.15	64,062.30
Olympia.....	40,001.34	.....	6,086.37	26,472.60	71,600.31	31,666.64	1,172.61	104,368.56
<i>Cruisers, third class.</i>								
Albany.....	128,085.45	648.77	29,399.87	52,705.78	210,829.87	3,795.08	1,169.85	215,805.40
Birmingham.....	169,067.84	1,367.93	26,012.10	95,435.46	309,127.53	31,407.98	1,769.20	336,105.89
Boston.....	.....	.....	.....	27,657.06	3,537.03	181.61	21.65	27,740.29
Charleston.....	81,545.01	16.90	15,810.06	37,090.31	53,557.33	67,745.45	1,063.42	209,111.74
Chester.....	158,845.67	976.38	38,899.80	61,647.46	265,270.53	26,464.36	1,445.04	283,081.04
Cincinnati.....	167,742.97	1,101.71	44,813.39	75,204.88	288,014.88	26,449.23	1,097.32	303,969.15
Cleveland.....	78,398.49	108.65	66,623.67	26,119.63	170,160.43	7,328.24	2,022.32	178,508.08
Denver.....	150,875.63	599.20	38,282.97	68,523.73	258,594.51	18,264.89	2,724.97	279,584.24
Des Moines.....	133,022.81	1,647.64	40,622.42	65,901.62	239,446.28	18,117.67	1,234.97	258,793.17
Galveston.....	160,784.15	703.34	40,622.42	65,901.62	239,446.28	18,117.67	1,234.97	258,793.17
Marblehead.....	13,983.59	5.88	4,873.90	19,878.94	28,747.31	21,844.74	2,613.08	60,198.07
Montgomery.....	41,610.79	187.87	12,076.35	20,503.41	103,848.67	2,583.19	2,283.19	107,673.60
New Orleans.....	107,784.62	128.37	28,544.08	48,073.11	176,523.75	20,450.17	2,583.19	189,200.87
Raleigh.....	107,718.17	701.48	28,544.08	48,073.11	176,523.75	20,450.17	2,583.19	189,200.87
Salem.....	107,265.00	301.38	21,259.47	39,107.61	168,834.46	36,715.09	271.97	207,927.86
Texas.....	108,023.08	1,108.50	24,872.34	43,136.86	185,640.21	54,760.44	1,897.15	245,297.80

Destroyers.

Ammen.....	55,430.13	3.18	8,942.06	46,570.84	112,846.19	13,228.86	462.97	120,533.02
Aylin.....	15,777.97	21.24	3,467.02	22,332.84	41,877.22	4,822.84	12.99	41,812.46
Bainbridge.....	42,143.26	51.54	11,280.54	18,174.41	71,694.84	7,346.51	81.50	78,961.46
Bath.....	15,188.43	38.04	3,072.77	23,422.10	41,783.84	20,686.82	41.99	42,464.66
Berry.....	38,004.83	18.16	10,762.16	26,852.67	71,067.82	20,194.38	261.11	92,118.31
Beale.....	16,109.28	30.79	11,633.21	36,338.47	104,451.98	12,826.26	177.11	117,694.36
Bombam.....	24,897.50	.....	6,377.23	41,185.45	110,284.92	2,914.53	321.71	74,846.94
Burrows.....	54,104.08	.....	9,313.67	46,870.17	122,087.87	6,228.37	331.71	118,848.20
Cassin.....	55,558.03	1.90	12,012.52	64,465.12	165,938.10	24,064.70	183.80	123,970.26
Chaunoy.....	40,272.67	.....	10,946.32	64,642.81	165,938.10	74.82	122.25	120,422.81
Cummings.....	39,457.09	.....	10,470.15	50,336.11	120,265.44	15,008.65	163.90	120,422.81
Dale.....	39,591.11	12.60	10,866.18	50,336.11	120,265.44	15,008.65	163.90	120,422.81
Deatur.....	24,365.83	183.23	12,773.49	38,133.69	108,319.38	13,363.63	121.20	101,715.62
Drayton.....	50,336.63	17.44	12,773.49	38,133.69	108,319.38	13,363.63	48.24	101,715.62
Duncan.....	17,144.44	11.20	10,138.55	38,243.22	129,443.06	1,233.71	404.59	129,443.06
Dunning.....	50,983.36	.....	12,318.55	55,224.45	139,107.31	13,301.21	284.22	139,412.24
Ellis.....	37,240.88	315.07	12,318.55	55,224.45	139,107.31	13,301.21	284.22	139,412.24
Hamley.....	37,973.48	15.76	12,710.18	42,684.83	113,683.23	10,900.15	263.08	124,886.46
Harris.....	34,104.13	3.53	8,473.74	20,691.78	61,810.12	23,164.09	1,602.97	84,976.26
Hall.....	21,597.04	.....	5,952.70	19,230.72	44,631.42	5,207.59	1,008.76	49,839.01
Jarvis.....	54,241.70	.....	9,510.03	51,180.92	116,921.72	5,154.70	1,008.76	123,076.42
Jenkins.....	57,297.79	8.91	9,988.16	52,372.33	118,467.12	6,466.45	428.29	125,558.93
Jouett.....	56,376.79	11.44	9,653.30	45,423.70	111,467.32	9,757.41	338.74	121,594.47
Lansom.....	15,874.11	.....	4,107.44	10,400.84	30,382.30	13,466.64	48.48	43,898.51
Lawrence.....	31,486.30	.....	6,943.11	14,678.82	53,108.48	6,987.67	347.86	60,444.01
Medonough.....	22,283.93	25	5,145.39	11,650.97	39,080.20	12,741.65	113.83	51,935.87
Mayrant.....	63,555.66	.....	11,405.91	35,096.38	100,027.92	18,480.87	638.42	119,145.21
McGowan.....	42,391.61	470.15	9,107.88	34,182.49	86,153.13	25,043.82	727.38	119,145.21
McCall.....	54,652.53	62.31	11,528.46	60,218.47	126,741.70	11,727.55	464.80	138,954.14
McDougal.....	2,251.32	.....	11,528.46	2,831.10	5,611.48	57.85	.....	6,689.33
Parker.....	31,107.18	.....	6,465.80	24,492.20	62,085.18	991.06	156.43	63,232.67
Patterson.....	55,187.61	4.19	12,660.04	49,950.31	117,302.15	11,525.40	688.39	129,615.94
Paulding.....	48,913.90	7.25	12,470.78	56,349.06	124,197.67	6,637.28	414.92	133,240.87
Paul Jones.....	39,312.04	.....	10,985.20	35,842.02	96,651.12	3,985.89	1,044.94	100,681.96
Perkins.....	46,772.82	7.55	8,767.97	30,741.04	76,528.60	21,132.42	150.68	100,111.70
Perry.....	22,657.12	4.50	11,138.88	31,015.79	90,931.99	8,191.01	412.18	99,638.18
Preble.....	1,300	1.30	6,036.92	20,706.37	49,401.71	56,875.33	1,317.06	107,594.10
Preston.....	30,740.82	28.50	7,281.50	17,296.77	55,317.69	15,537.31	358.47	71,213.57
Raid.....	26,864.27	8.58	6,193.73	16,710.74	46,828.61	15,738.36	594.58	65,146.73
Roe.....	36,798.51	.....	9,080.48	32,689.69	78,447.26	28,612.13	352.33	107,411.72
Smith.....	15,101.97	102.50	3,133.45	13,290.73	31,496.15	28,041.37	890.10	72,408.52
Stewart.....	37,567.04	.....	9,202.70	39,701.91	83,357.80	34,469.54	1,422.07	108,656.79
Terry.....	36,191.48	109.81	9,132.67	34,871.92	81,571.63	36,440.75	1,316.88	119,434.45
Tripp.....	55,776.05	14.73	7,953.14	36,799.37	90,053.74	35,664.83	1,422.07	117,037.45
Truxton.....	52,357.60	6.30	11,997.38	40,965.87	90,753.03	7,646.99	801.97	118,207.99
Walke.....	37,939.69	69.58	11,728.13	38,195.44	102,286.47	6,304.64	1,270.08	109,861.19
Warrington.....	57,044.00	6.05	8,260.07	35,052.68	81,342.27	20,172.83	794.55	102,306.96
Whipple.....	54,435.96	102.04	9,536.26	49,570.68	117,038.99	2,466.48	263.42	126,011.96
Worden.....	7,368.15	.....	11,852.71	36,247.35	101,738.06	11,876.96	417.35	104,567.98

STATEMENT B—Continued.

TABLE 3.—Statement showing expenditures for maintaining ships in commission—Continued.

Ships.	Title C.				Total cost of commission.	Title D, hull and machinery.	Title P, repairs, equipage.	Total cost of maintenance of ships.
	Accrued pay.	Incidental expenses (public bills).	Subsistence (including commuted rations).	Stores issued.				
Torpedo boats.								
Bagley.....				\$2,895.07	\$2,895.07	\$2,797.18	\$157.07	\$5,940.32
Bailey.....				8,518.66	8,518.66	18,352.29	916.02	27,788.97
Barney.....				2,248.79	2,248.79	1,932.87	91.42	4,483.08
Biddle.....				2,470.30	2,470.30	7,263.00	241.45	10,004.84
Blakeley.....				767.01	767.01	721.63	2.06	1,491.60
Craven.....				4,633.75	4,633.75	209.19		4,842.94
Dahlgren.....				1,648.47	1,648.47	740.37		2,388.84
De Long.....				1,601.96	1,601.96	1,559.99		3,161.95
Du Pont.....				726.47	726.47	1,056.15	2.73	1,785.35
Farragut.....	\$9,977.74		\$3,067.75	17,503.23	30,548.72	600.57	413.32	31,562.61
Fox.....	185.25		28.87	104.20	319.42		34	319.76
Goldsborough.....	10,048.59		2,969.85	4,286.67	17,315.11	4,311.14	386.61	22,012.86
Gwin.....				19.39	19.39			19.39
Manley.....				21.98	21.98	2,712.18		2,734.16
Morris.....				800.45	800.45	1,557.57	2.76	2,360.78
Rodgers.....				1,482.60	1,482.60	1,818.55	2.67	3,314.82
Shubrick.....				1,347.56	1,347.56	946.83		2,294.39
Somers.....				146.14	146.14	4,438.54		4,584.68
Stockton.....				1,303.09	1,303.09			1,332.33
Stratford.....				5,275.32	5,275.32		154.78	5,430.10
Thornton.....				1,677.25	1,677.25	433.55		2,110.81
Tingey.....		\$25.00	282.71	1,677.25	1,984.96			2,418.51
Townsend.....		50.00	280.98		330.98	388.69		719.67
Reserve division.....		1.04	16,447.05	1,724.42	2,065.38			2,444.07
Reserve torpedo group.....			19,000.53		16,448.09			16,448.09
Wilkes.....	152,291.84			30,230.06	200,571.96	178.72		200,750.68
Monitors.								
Amphitrite.....	26,121.10		5,498.33	8,186.28	39,805.71	978.86	15.00	37,892.57
Cheyenne.....	73,187.91		10,689.84	22,793.74	114,770.01	34,068.48	920.35	153,242.54
Monadnock.....	46,233.42	148.52	28,867.93	24,510.84	99,602.19	8,316.36	130.34	108,048.96
Monitor.....	44,866.76		1,342.20	22,718.55	68,927.50	11,388.80	580.55	80,905.15
Osark.....	87,142.88	314.27	25,619.20	44,955.45	158,031.80	27,965.84	360.97	186,353.81
Tallapoosa.....	62,914.23		10,668.74	94,238.09	167,821.06	3,381.20	734.87	169,498.62
Tenipah.....	95,162.69	637.54	27,948.10	35,866.70	159,608.12	25,862.33	571.30	185,641.77

Submarine.

A-3.....	3,330.23	3.00	63.90	3,155.79	11,073.57	2,893.97	74.33	14,080.87
A-3.....	3,306.05	.....	.....	2,276.84	5,631.92	2,309.46	92.91	7,954.29
A-4.....	3,631.85	16.80	40.80	3,423.83	11,132.26	11,660.87	64.05	23,847.20
A-5.....	3,637.83	3.00	.....	3,136.82	6,777.15	3,085.09	37.04	9,899.27
A-6.....	7,057.11	.....	55.20	4,411.17	12,153.48	2,712.29	32.67	14,866.44
A-7.....	8,130.21	1.20	71.10	9,187.52	17,960.03	16,044.02	24.10	18,068.15
B-1.....	228.66	.....	.....	449.17	677.73	13,908.99	.....	14,498.72
B-2.....	7,371.05	3.60	98.10	5,274.45	12,647.30	4,138.85	268.74	17,054.79
B-3.....	5,681.87	.....	81.00	6,784.82	12,547.69	16,211.03	845.93	29,106.25
C-1.....	16,267.55	.....	.....	10,786.02	27,943.57	19,418.75	.....	46,462.83
C-2.....	15,798.74	.....	.....	6,469.94	23,248.68	15,028.16	.....	37,272.84
C-3.....	17,278.24	.....	.....	27,776.85	45,065.09	14,937.65	.....	69,972.94
C-4.....	15,660.95	.....	.....	8,301.37	24,861.72	16,854.17	.....	41,943.06
C-5.....	15,831.14	.....	33.90	7,063.31	24,861.72	14,702.11	37.77	40,096.97
D-1.....	16,945.69	.....	61.00	23,156.69	49,149.23	11,867.48	2.91	61,530.43
D-2.....	15,214.99	.....	.....	41,868.53	41,868.53	10,836.83	37.90	55,334.40
D-3.....	16,524.25	.....	94.04	11,771.14	28,940.03	13,522.05	62.85	37,858.09
E-1.....	15,311.42	.....	27.60	11,771.13	28,940.03	13,522.05	878.72	43,718.70
E-2.....	17,436.45	.....	69.60	1,367.26	28,940.03	11,860.51	482.20	40,722.08
E-3.....	16,848.40	25.00	.....	6,571.45	27,913.84	22,000.01	383.40	49,476.28
F-1.....	16,831.17	.....	.....	6,571.45	27,913.84	22,000.01	383.40	49,476.28
F-2.....	16,832.07	.....	.....	11,049.12	27,913.84	17,029.49	294.76	36,178.24
F-3.....	16,837.07	.....	.....	13,789.37	27,913.84	17,029.49	294.76	36,178.24
G-1.....	20,097.44	.....	.....	5,832.08	26,759.54	18,302.82	390.83	46,000.68
G-2.....	10,461.17	.....	.....	4,778.15	15,237.32	8,193.82	94.42	23,476.11
G-3.....	6,336.18	.....	.....	4,449.75	10,789.32	78.98	.....	15,468.18
H-1.....	11,314.23	.....	56.45	12,854.54	24,127.22	70.34	277.00	24,404.22
H-2.....	11,071.82	.....	59.67	8,696.89	14,897.53	70.34	311.22	15,068.64
H-3.....	3,094.53	.....	169.56	10,707.70	13,971.78	80.69	173.55	14,938.47
K-1.....	4,070.01	.....	.....	1,534.15	6,213.15	1,008.57	.....	6,293.75
K-2.....	6,194.66	.....	.....	2,765.92	8,960.53	.....	21.16	9,990.31
Buffalo.....	124,855.03	721.46	28,905.44	91,467.49	245,860.02	21,099.24	5,303.54	272,302.80
Hancock.....	128,261.70	1,386.43	26,615.29	2,317.40	157,600.82	156,017.34	1,049.75	313,677.91
Prairie.....	126,560.15	1,409.37	26,694.53	3,512.09	166,965.14	28,973.04	564.81	290,402.99
Rainbow.....	140,838.55	1,453.51	32,036.76	58,899.08	252,666.99	21,551.99	1,136.55	256,415.43
Annapolis.....	97,641.16	144.34	20,180.18	33,316.46	151,252.14	20,979.45	1,536.16	173,797.75
Calico.....	17,639.56	541.03	4,068.76	7,504.85	30,684.80	30,684.80	943.44	31,628.24
Castine.....	41,469.77	77.48	9,752.82	12,313.47	63,648.54	61,402.09	2,314.97	127,560.90
Concord.....	.....	.....	.....	1,399.20	1,399.20	2.15	1,401.35	.....
Dolphin.....	104,227.37	1,845.44	23,434.04	30,491.61	159,998.46	8,011.56	848.17	168,358.19
Don Juan de Austria.....	.....	.....	.....	2,751.47	2,751.47	2,678.70	.....	5,430.17
Dubuque.....	.....	.....	.....	4,727.84	4,727.84	3,699.88	41.75	8,469.47
Efeso.....	66,507.55	807.73	13,294.08	15,271.95	85,851.56	1,053.97	33.40	87,573.93
Helena.....	119,117.43	7,248.33	26,148.28	10,157.25	191,671.29	3,945.17	397.30	195,913.76
Isla de Luzon.....	10,121.94	30.00	542.70	11,566.37	11,566.37	61,966.55	3,023.63	66,556.55
Marietta.....	31,749.45	93.34	6,085.47	11,641.33	50,422.59	10,862.18	1,773.75	63,078.52

Transport.

Gunboats.

STATEMENT B—Continued.

TABLE 3.—Statement showing expenditures for maintaining ships in commission—Continued.

Ships.	Title C.				Total cost of commission.	Title D, hull and machinery.	Title P, repairs, and equipment.	Total cost of maintenance of ships.
	Accrued pay.	Incidental expenses (public bills).	Subsistence (including commuted rations).	Stores issued.				
Gunboats—Continued.								
Maechles.	\$16,554.59	\$184.30	\$2,968.96	\$3,359.58	\$23,067.43	\$15,288.12	\$674.97	\$38,960.53
Nashville.	108,154.16	1,708.80	35,342.79	30,222.23	175,428.07	14,597.17	810.81	190,836.05
Peduech.	102,183.94	460.14	19,683.43	20,060.79	151,338.30	13,140.77	1,809.26	166,283.33
Palos.				8,946.48	8,946.48			8,946.48
Pampanga.	12,451.01	388.98	4,801.37	2,066.36	19,747.63	311.57	135.29	20,194.48
Petrel.	82,839.34	1,441.36	22,070.09	22,852.25	129,203.04	9,856.82	855.13	139,914.99
Princeton.	49,237.47	87.66	26,335.67	26,868.63	106,529.42	94.01	94.01	106,678.08
Quinos.	30,906.35	517.46	6,988.48	13,076.68	51,441.97	63.29	34.15	61,539.41
Sacramento.	17,516.21	21.54	3,843.07	4,648.71	26,034.53		502.56	26,537.09
Sanar.	23,167.77	297.71	6,555.98	11,688.78	41,708.24	408.85	11.92	42,126.01
Sandoval.				433.01	433.01			433.01
Vicksburg.	37,171.95	134.16	6,144.76	10,911.31	44,362.18	4,099.47	23.35	48,465.00
Villablos.	31,894.63	944.66	7,937.18	12,463.90	53,210.37	3,877.90	32.28	57,080.45
Wheeling.	89,760.09	1,042.80	19,619.89	27,066.31	138,362.09	3,162.72	16.66	141,541.47
Wilmington.	107,422.32	1,496.95	24,386.39	53,786.14	186,263.80	48,463.91	241.33	234,969.04
Yorktown.	108,481.63	271.17	25,019.08	44,340.01	173,111.88	11,518.59	392.10	185,022.57
Supply ships.								
Calico.	97,394.63	698.72	21,595.04	37,611.19	157,299.78	10,157.91	644.57	168,122.26
Culros.	96,345.03	900.16	19,370.12	34,151.56	150,769.87	16,779.87	1,767.37	168,817.37
Glacier.	94,243.50	966.40	20,880.94	60,783.73	185,838.57	15,459.80	1,352.94	202,651.31
Supply.	75,999.64	861.90	18,603.45	53,657.49	147,222.48	7,543.23	453.93	155,219.64
Fuel ships.								
Abasco.	22,112.56	755.31	10,338.00	24,908.60	58,113.47	10,773.84	537.75	69,415.06
Alcazar.	26,036.23	1,117.21	12,297.84	34,515.07	68,228.35	15,244.73	214.24	83,683.31
Alexander.	1,922.64	2.64	5,790.99	4,760.99	8,752.29			8,752.29
Arctus.	25,072.64	3,321.15	8,249.99	32,788.99	67,324.55	20,374.85	341.71	90,109.11
Britus.	24,068.91	2,925.00	7,043.67	30,661.77	64,699.26	26,794.51	685.41	92,052.17
Cyrenus.	24,108.50	885.83	4,890.80	15,748.87	45,626.98	26,749.48	988.50	73,110.18
Cyclops.	52,224.54	862.58	17,410.29	53,217.11	123,703.48	13,193.48	1,661.40	138,560.28
Hamlet.	96,071.73	124.90	20,733.08	28,960.03	145,248.77	17,297.08	3,749.09	163,740.78
Harbor.	20,072.69	117.07	7,743.60	12,994.98	41,028.49	12,426.84	75.21	53,528.54
Jason.	46,880.99	1,684.47	17,104.80	37,586.96	103,667.69	5,589.37	\$19.54	109,267.35

Jupiter.....	106,174.92	170.57	32,120.06	71,474.15	211,063.50	6,063.52	724.10	219,254.12
Juslin.....	20,684.77	1,064.83	7,817.07	32,474.03	65,081.33	18,183.82	264.98	83,062.13
Leontias.....	26,683.34	181.05	4,798.45	1,614.90	32,227.94	76,102.45	1,090.57	109,400.26
Mars.....	18,600.59	204.88	6,840.80	18,796.35	43,583.12	32,286.30	168.16	76,839.69
Nanahan.....	18,540.17	204.23	7,858.29	28,552.06	55,131.65	47,828.30	286.05	103,204.00
Neptune.....	22,652.26	133.71	7,294.20	14,906.14	44,980.31	47,680.02	1,893.77	94,562.10
Nereus.....	30,416.62	660.67	13,317.20	21,463.78	74,843.37	12,578.41	120.76	87,647.44
Nero.....	15,068.99	188.94	4,901.20	11,187.00	31,160.03	34,518.35	880.05	66,678.43
Orion.....	50,144.06	1,073.64	17,497.20	29,878.91	99,493.81	8,321.46	1,760.51	104,584.78
Proteus.....	40,580.32	6.20	17,497.20	38,514.73	99,493.81	58,075.62	614.83	164,170.70
Saturn.....	16,431.28	266.50	5,231.10	13,299.04	35,227.82	49,140.21	1,141.87	88,760.40
Sterling.....	2,011.40	8.42	632.00	131.61	2,778.43	1,445.68	20.94	4,254.06
Vulcan.....	21,981.19	268.47	7,099.01	13,162.41	42,531.08	35,460.61	330.88	78,381.87
<i>Converted yachts.</i>								
Athen.....	42,706.64	142.78	9,268.04	1,962.20	1,362.20	526.25		1,888.45
Devoties.....				3,021.84	3,021.84	948.60		3,970.44
Eagle.....				11,776.02	68,922.48	6,745.26		71,738.92
Gloucester.....				2,581.87	2,581.87	4,646.46	1,105.18	7,238.33
Hawes.....				2,443.83	2,443.83	2,013.09	40.38	4,504.90
Marlow.....	121,947.66	2,282.81	24,423.50	22,677.28	171,328.26	21,435.48	2,083.37	194,847.10
Scamflower.....	62,205.36	806.01	16,063.10	25,677.84	105,473.71	7,422.47	49.28	112,904.08
Stranger.....				1,704.78	1,704.78	223.94		1,928.70
Sylvia.....	28,010.15	124.00	4,658.98	1,908.10	34,701.23	2,415.24	565.03	37,681.50
Vixen.....				2,308.08	2,308.08	3,171.78	28.32	5,508.18
Wasp.....				2,091.04	2,091.04	7,751.63	727.88	10,570.84
Yankton.....	49,315.25	268.21		2,831.39	2,381.30	8,205.61	240.84	10,836.84
			10,319.94	22,069.98	82,483.38	14,410.31	2,864.00	99,868.29
<i>Tugs.</i>								
Choctaw.....	3,509.92		1,754.26	7,811.99	5,294.17	4,261.61		9,526.78
Fortune.....	11,213.87		3,968.82		28,014.28	9,359.38	398.96	32,706.61
Irroquois.....		45.08	4,963.60		4,438.68	6,194.90	116.77	9,790.30
Navajo.....	31,642.61		7,082.40	12,147.83	51,287.70	6,894.77	9.50	88,181.97
Ontario.....	28,276.70	9.72	6,538.19	14,313.98	49,937.59	6,327.39	448.48	86,733.44
Oscola.....	18,799.96		5,542.25	6,899.02	31,241.88	2,359.68	121.30	33,722.71
Pataasco.....	29,268.86		7,245.54	9,386.84	46,840.23	2,985.66	66.02	48,999.91
Petuxent.....	27,267.63		7,822.28	9,849.58	44,806.49	3,154.01	40.68	47,704.18
Pawtucket.....	3,031.94		1,835.99		4,587.89	10,444.29		15,032.18
Pensacola.....	2,068.54		1,718.20		3,466.74	1,416.26		4,882.99
Perris.....	20,766.31		6,688.47	4,227.73	30,832.31	2,622.62	181.10	33,386.13
Pescataqua.....	21,764.08		5,951.01	12,700.82	40,968.90	12,063.27	367.94	53,339.71
Potomac.....	17,270.08		3,570.81	6,771.03	27,763.39	7,786.32	83.72	29,545.43
Scotoma.....	3,571.52	14.15	1,712.82	13,956.98	52,554.38	2,913.06	28.23	55,911.63
Schoyuna.....	4,812.08		1,712.82		4,747.38	9,326.39		10,890.27
Standard.....			1,900.70	1,116.84	1,947.70	1,324.35		3,272.11
Tecumseh.....	2,833.11		1,000.70		1,707.61	1,324.35		3,031.91
Triton.....	2,083.81		2,820.19		2,043.02	3,474.61		7,118.26
Uman.....	18,885.00	.80	4,829.54	1,157.28	24,583.08	1,779.04	114.89	10,088.24
Wampetuck.....	16,449.83		5,069.89	9,816.39	30,965.90	6,517.61	22.14	37,506.66

STATEMENT B—Continued.

TABLE 3.—Statement showing expenditures for maintaining ships in commission—Continued.

Ships.	Title C.				Total cost of commisser.	Title D, hull and machinery.	Title P, repairs, equipage.	Total cost of maintenance of ships.
	Accrued pay.	Incidental expenses (public bills).	Subsistence (including commuted rations).	Stores issued.				
<i>Tenders to torpedo vessels.</i>								
Alert.....	\$104,862.52	\$130.91	\$29,902.68	\$32,164.01	\$167,020.12	\$4,978.01	\$599.27	\$172,597.40
Dixie.....	238,510.94	735.65	41,690.53	61,158.16	342,005.29	19,227.50	337.50	361,660.38
Iris.....	118,412.36	886.26	22,954.17	42,062.23	184,305.04	4,060.80	266.66	188,652.40
Mohican.....			8,783.44	43,597.94	52,381.38	80.17	676.21	53,087.76
Pompey.....	70,650.17	172.07	18,594.64	20,528.60	109,945.48	4,562.96	278.33	114,786.77
Seymour.....	58,224.33	137.88	20,136.20	23,638.90	97,152.31	2,138.53	381.76	99,672.60
<i>Unserviceable for war purposes.</i>								
Adams.....				1,056.34	1,056.34	1,043.30	138.01	2,237.74
Cumberland.....	128,762.65	578.33	19,400.02	13,673.90	162,720.89	3,383.70	27.01	168,101.60
Essex.....				5,408.08	5,408.08			5,408.08
Granite State.....				3,407.43	3,407.43	6,268.09	803.44	10,468.96
Intrepid.....				1,556.20	1,556.20	1,731.97	85.54	3,373.71
Philadelphia.....			3,739.56		20,841.19	2,518.95	382.13	23,692.27
Southery.....	17,101.63		19,337.76		27,513.70	2,021.33	4.24	29,539.27
Towhee.....				8,175.94	5,213.04	2,882.98		8,098.02
Towhee.....				5,213.04	1,009.22	575.33		1,584.55
Wolverine.....				1,009.22	1,009.22			1,009.22
Yantic.....				1,428.45	1,428.45	11,503.00		12,931.45
<i>Special types.</i>								
Lebanon.....	38,895.18	151.89	9,514.21	8,802.27	57,423.55	18,295.54	146.67	75,856.76
San Francisco.....	167,686.91	748.65	33,717.42	43,981.90	261,064.88	2,874.43	920.11	264,979.42
Salade.....	98,987.00	2,871.89	23,869.90	51,568.32	182,735.11	32,800.92	388.09	215,494.12
Patuxent.....	79,704.05	200.35	11,271.07	19,488.92	110,615.00	13,862.26	1,268.22	125,745.48
Vestal.....	135,419.47	566.81	23,866.08	49,780.75	209,932.11	134,126.04	4,666.96	348,423.11
<i>Receiving ships.</i>								
Portsmouth, N. H.....	93,616.65	129.08	20,657.05		114,402.79			114,402.79
Boston, Mass.....	285,608.19	104.37	7,539.48	1,571.04	294,806.08			294,806.08
Gavite, P. I.....	79,305.46	119.96	20,863.73	21,611.17	100,810.96			100,810.96
Marine Island, Cal.....	362,006.32	494.86	14,884.15	21,611.17	400,306.46			400,306.46
Newport, R. I.....	364,076.72	104.50	23,866.08	49,780.75	448,298.04			448,298.04
New York, N. Y.....	896,697.31	169.31	23,866.08	49,780.75	976,111.26			976,111.26

Norfolk, Va.....	909,725.73	458.04	221,300.39	71,470.95	1,203,045.71	1,203,045.71
Philadelphia, Pa.....	346,634.50	58.49	5,078.40	2,690.49	354,381.97	354,381.97
Puget Sound, Wash.....	168,578.24	506.67	5,403.90	24,796.27	199,287.08	199,287.08
San Francisco, Cal.....	416,720.22	898.20	143,005.26	32,061.44	592,635.11	592,635.11
Charleston, S. C.....	226,535.67	66.05	49,806.49	11,644.43	286,953.14	286,953.14
Station ship, Annapolis, Md.....	219,807.56	60.74	42,636.61	44,016.79	297,521.70	297,521.70
Seamen's quarters, Washington.....	93,606.26	232.08	17,821.12	111,659.45	111,659.45	111,659.45
Apprentice seamen, Newport, R. I.....	384,543.15	16.21	1,134.90	384,659.36	384,659.36	384,659.36
Olongapo, P. I.....					1,134.90	1,134.90
<i>Fish Commission vessels.</i>						
Fish Hawk.....	28,268.10		6,071.00		32,337.10	32,337.10
Albatross.....	56,019.10	24.96	9,204.56	437.04	65,685.66	65,685.66
<i>Chartered vessels.</i>						
Washingtonian.....	1,589.15	68.83	798.00	13,305.08	15,749.06	15,749.06
<i>Naval Militia.</i>						
State of California.....				893.15	893.15	893.15
District of Columbia.....				975.38	975.38	975.38
State of Illinois.....				2,345.82	2,345.82	2,345.82
State of Massachusetts.....				1,790.05	1,790.05	1,790.05
State of Indiana.....				25.50	25.50	25.50
State of Ohio.....				2,476.02	2,476.02	2,476.02
State of Wisconsin.....				1,020.61	1,020.61	1,020.61
Total	28,661,494.95	107,539.52	6,311,223.49	10,534,212.60	45,614,490.56	52,904,982.95

RECAPITULATION OF EXPENDITURES UNDER TITLE C.

Charged direct to appropriations (see Table I).....	\$29,374,312.23
Issued from stores account (Titles B and Y).....	10,494,242.09
Issues of medical stores.....	89,970.51
Issues of provisions.....	5,705,955.73
Total, Title C.	45,614,490.56

STATEMENT B—Continued.

TABLE 4.—Statement showing expenditures for repairs to vessels (Title D).

Ships.	Wear and maintenance.			Changes and additions.			Casualties.			Public vouchers.	Total.
	Labor.	Indirect.	Material.	Labor.	Indirect.	Material.	Labor.	Indirect.	Material.		
<i>Battleships, first line.</i>											
Arkansas.....	\$9,268.99	\$3,637.71	\$5,307.78	\$20,925.41	\$5,557.72	\$16,941.82				\$703.89	\$65,333.32
Delaware.....	32,118.73	19,611.01	19,594.42	37,485.42	24,013.86	20,628.61	\$38.98	\$27.17	\$1.27	2,085.40	155,004.87
Florida.....	13,122.12	3,798.79	13,251.99	38,818.07	11,978.06	25,138.97	431.98	107.99	99.68	2,788.52	109,532.70
Michigan.....	2,897.03		2,320.53	212.08	95.07	999.72				2,219.25	9,913.02
New York.....	12.30	3.46	9.48				40.73	18.27	71.34	56,616.13	247,033.58
North Dakota.....	48,898.27	16,276.63	20,040.18	56,461.16	21,085.82	27,530.31	136.52	62.06	5.60	10,224.90	189,468.66
South Carolina.....	23,669.16	12,941.37	12,088.63	34,649.28	22,216.81	73,562.56	62.49	36.75	6.71	248.00	2,706.45
Texas.....	3,067.53	954.90	1,088.78				6.20	3.45	6.50	4,299.63	30,216.88
Utah.....	9,007.22	913.65	2,499.31	5,153.91	1,958.84	12,384.32				316.50	51,004.94
Wyoming.....	14,466.25	4,918.08	6,768.28	9,711.92	3,750.48	11,113.43					
<i>Battleships, second line.</i>											
Alabama.....	5,814.23	2,311.01	1,001.41	1,929.51	769.62	1,743.08				89.50	13,653.36
Connecticut.....	18,342.75	7,428.90	7,891.22	40,763.92	18,165.20	36,003.99				10,340.75	138,966.82
Georgia.....	46,422.51	23,614.46	13,822.09	42,503.79	20,828.90	15,559.89				22,039.40	184,791.01
Idaho.....	35,441.72	14,293.07	12,121.89	5,488.06	2,448.10	7,351.25				928.08	78,078.17
Illinois.....	2,377.41	980.46	1,654.02	1,250.65	476.17	461.19				7,255.47	7,255.47
Indiana.....	2,098.82	836.92	679.68	555.10	222.99	290.26				92.00	4,775.77
Iowa.....	2,159.37	839.39	1,182.59	984.68	339.86	275.74				97.00	5,878.63
Kansas.....	28,401.98	9,347.99	26,635.34	12,520.58	4,381.39	12,311.23				714.20	94,315.71
Kearny.....	594.97	199.59	686.43	699.28	316.65	11,615.74				921.90	15,034.56
Kentucky.....	1,033.68	398.71	229.16	996.56	408.97	282.41				41.50	3,390.99
Louisiana.....	4,476.02	2,536.84	4,527.82	3,703.65	2,653.95	69,104.75	451.28	312.59	39.68	10,576.40	98,381.98
Maine.....	1,292.50	421.13	870.37	1,988.96	608.23	933.83				63.00	5,978.02
Massachusetts.....	1,033.86	401.26	906.60	258.86	113.60	197.93				48.50	2,954.61
Minnesota.....	32,892.27	13,538.19	11,766.81	10,288.32	4,224.00	22,554.08				51,990.57	147,214.24
Mississippi.....	836.46	363.95	1,551.48	665.60	382.33	5,829.01				9,780.83	9,780.83
Missouri.....	14,264.86	5,262.13	17,639.38	8,612.99	2,321.59	3,621.77				225.00	48,349.71
Nebraska.....	13,403.28	6,658.96	6,707.42	8,967.45	4,488.93	10,526.19				15,575.75	65,436.88
New Hampshire.....	6,048.10	4,277.35	7,647.99	1,024.57	706.49	1,112.64				278.25	22,174.40
New Jersey.....	21,974.06	13,216.98	8,522.19	19,239.06	12,320.91	9,651.77	82.17	71.34	26.30	17,767.80	99,662.76
New York.....	14,614.63	4,663.99	8,220.01	1,871.54	665.21	9,737.53	65.73	28.25	10.02	31,706.11	81,702.11
Ohio.....	27,086.41	247.95	94.26	1,115.40	615.10	406.71				116.00	3,057.94
Oregon.....	27,086.41	12,994.13	9,504.01	14,503.61	6,896.18	10,226.31				739.50	81,676.18
Rhode Island.....	51,890.60	31,634.99	58,044.60	49,288.71	32,319.47	24,088.39	1,618.81	1,111.89	237.02	13,775.30	283,993.48
Vermont.....	40,770.70	19,684.70	10,914.19	21,921.69	11,142.96	26,766.90	2.94	1.53	6.50	6,564.90	136,753.79
Virginia.....											
Wisconsin.....	1,763.73	674.56	874.15	708.08	277.80	424.13				4,776.14	4,776.14

Armored cruisers.

California.....	10,125.75	4,145.96	10,344.96	2,917.30	1,326.12	7,850.32	388.00	37,080.46
Colorado.....	55,085.43	27,237.53	24,735.91	74,305.33	39,057.67	34,015.09	170,075.00	424,815.81
Maryland.....	14,491.10	17,406.68	17,406.68	4,249.60	1,898.40	5,481.46	58.00	79,319.73
Montana.....	16,352.89	2,410.29	6,324.77	9,397.63	2,083.10	4,175.26	10,423.50	57,947.44
North Carolina.....	6,006.57	2,905.66	2,907.84	3,994.39	2,083.10	1,839.55	5,013.50	24,094.53
Pittsburgh.....	14,014.22	6,705.63	9,850.79	20,290.81	8,991.09	11,230.29	166,707.00	237,738.13
South Dakota.....	13,434.76	6,232.06	7,858.85	2,228.28	1,094.11	8,699.70	660.03	40,197.70
Tennessee.....	25,494.77	9,035.92	8,652.76	13,164.87	5,027.44	10,661.88	2,771.95	75,302.69
Washington.....	3,960.83	1,957.26	3,161.67	1,518.74	5,670.04	2,505.45	10,773.00	24,253.96
West Virginia.....	13,596.53	6,946.69	16,947.15	5,757.55	3,861.14	2,505.45	10,773.00	49,212.51

Cruisers, first class.

Brooklyn.....	88,746.21	33,112.22	27,917.77	65,112.13	27,798.45	31,112.83	782.86	276,577.47
Charleston.....	6,553.36	2,904.82	3,446.32	2,977.01	1,612.25	1,135.81	116.00	18,746.56
Illwaukee.....	16,319.73	8,404.77	4,022.51	4,057.73	2,123.77	3,894.65	116.00	38,414.16
Savannah.....	8,300.46	4,842.94	3,960.85	678.96	336.50	132.77	1,083.61	19,460.14
St. Louis.....	8,154.29	4,661.69	3,517.14	5,571.12	2,853.74	3,065.51	103.00	27,971.69

Cruisers, second class.

Baltimore.....	3,601.15	1,543.09	1,485.63	20,493.08	9,164.12	6,950.25	41.50	43,283.82
Chicago.....	27,758.80	260.00	5,420.38	5,400.23	2,397.89	71.76	84.77	1,517.55
Columbia.....	31,076.53	10,027.54	5,420.38	5,400.23	2,397.89	3,480.15	133.12	54,317.88
Minneapolis.....	5,552	10,725.82	25,168.06	5,752.16	2,347.47	2,863.43	179.30	77,931.02
Newark.....	14,841.14	2.76	6,591.21	1,607.89	669.96	1,282.74	179.30	31,585.64
Olympia.....		6,433.40						

Cruisers, third class.

Albany.....	1,233.13	799.77	964.76	168.67	110.72	423.53	96.54	3,785.98
Birmingham.....	6,112.37	2,008.52	13,447.49	1,898.78	787.75	6,441.15	41.50	31,307.86
Boston.....	63.02	28.06	12.53				58.00	161.61
Chattanooga.....	32,814.62	13,734.12	14,750.22	2,790.60	1,506.94	2,121.91	58.00	67,746.45
Chester.....	4,725.65	2,224.38	3,663.32	2,490.90	1,081.67	6,999.44	58.00	17,641.06
Cincinnati.....	13,932.54	6,801.06	3,968.86	1,161.12	98.62	37.05	459.66	26,446.23
Cleveland.....	2,998.73	3,960.69	3,144.46	567.20	290.82	185.45	7,328.24	18,254.39
Denver.....	8,678.83	3,960.69	3,144.46	1,128.70	535.00	306.95	50.50	46,208.57
Des Moines.....	21,028.76	7,835.37	9,246.19	4,394.58	1,765.46	1,787.73	70.98	18,117.67
Galveston.....	5,182.41	3,783.34	3,235.89	1,466.65	1,780.78	1,646.26	15.00	19,123.72
Marblehead.....	7,244.81	3,063.83	3,197.94	2,546.47	1,101.89	1,946.26	37.10	21,344.74
Montgomery.....	9,060.43	4,862.66	3,059.07	3,372.04	1,478.30	973.32	49.00	20,450.57
New Orleans.....	10,348.03	4,754.33	3,059.07	943.85	534.90	2,446.43	53.00	2,305.90
Raleigh.....	1,076.19	522.87	97.14	97.14	38.74	23.14	2,305.90	36,715.09
Salem.....	3,365.11	3,783.11	11,176.12	5,746.24	2,201.63	7,402.26	50.50	54,790.44
Tacoma.....	22,943.20	8,787.28	9,074.12	6,286.28	2,746.40	3,760.09	89.55	

STATEMENT B—Continued.

TABLE 4.—Statement showing expenditures for repairs to vessels (Title D)—Continued.

Ships.	Wear and maintenance.			Changes and additions.			Casualties.			Public vouchers.	Total.
	Labor.	Indirect.	Material.	Labor.	Indirect.	Material.	Labor.	Indirect.	Material.		
<i>Destroyers.</i>											
Ammen.	\$6,417.26	\$2,571.30	\$2,005.35	\$1,280.77	\$560.76	\$1,269.93	\$2,107.81	\$1,563.83	\$864.21	\$50.50	\$13,233.86
Aylwin.	146.09	68.14	9.53	1.13	.61	1.50					4,532.94
Bainbridge.	601.36	277.14	5,130.43	504.77	353.19	378.62					7,245.51
Balch.	329.05	128.37	227.40								685.83
Barry.	6,349.70	2,004.18	9,576.24	915.17	510.33	238.76					20,192.38
Beale.	4,940.21	2,587.00	2,587.00	1,308.40	891.89	639.13	63.27	18.76	10.46	41.50	12,526.26
Bennett.	1,340.21	141.19	343.34	101.64	101.64	1,583.78	108.99	40.57	6.08		2,914.63
Burrows.	406.96	861.62	527.58	833.23	439.77	797.28				50.50	5,226.57
Cassin.	114.44	76.30	68.33			18.32					276.39
Chauncey.	9,336.73	5,078.89	8,290.80	702.15	436.61	265.62					24,050.70
Cummings.	11.49	9.94	35.36			18.03					74.82
Dale.	6,208.38	2,890.05	6,163.01	732.30	524.39	156.92					15,005.05
Decatur.	3,611.61	1,339.23	6,698.74	1,019.04	530.64	164.37					13,303.63
Drayton.	3,611.13	1,283.86	2,723.66	1,940.13	649.46	2,303.70				41.50	12,422.48
Duncan.	627.83	270.56	337.42	7.05	2.82	138.03					1,263.71
Fanning.	4,152.70	2,664.86	2,741.02	1,366.83	843.89	1,138.91	266.72	124.96	32.85	49.48	13,801.29
Fussler.	1,761.37	720.67	593.34	1,360.65	230.55	332.04					8,062.85
Hendley.	1,634.76	641.30	1,697.40	446.45	1,691.76	1,561.76	2,360.74	782.08	190.02	326.00	10,900.15
Hopkins.	9,609.89	3,783.40	7,084.09	792.76	362.61	1,562.35					23,166.09
Hull.	914.41	421.74	424.94	265.29	115.71	64.56	13.77	7.14			2,077.69
Jarvis.	1,298.26	803.11	902.35	800.95	562.33	698.30				41.50	5,154.70
Jennius.	3,216.26	1,781.99	1,064.57	83.65	61.57	176.26	18.54	11.50	.61	41.50	6,466.45
Lanson.	2,394.06	1,977.93	871.63	1,566.26	1,106.16	800.88				151.50	9,737.41
Lawrence.	6,827.44	2,706.63	1,738.69	963.37	352.47	160.25	475.52	205.84	137.43		13,466.64
Madonough.	2,799.49	1,194.97	1,111.42	3,752.53	370.35	798.00					6,957.67
Mayhew.	2,873.68	1,321.04	1,164.24	3,752.74	1,652.12	778.36	708.78	365.67	127.12	41.50	12,741.65
McCall.	2,061.42	983.03	6,116.29	1,942.10	777.20	1,694.33					15,480.57
McDougal.	2,948.04	1,982.96	4,864.39	1,404.88	468.76	1,165.30	.28	.10	5.37	47.48	11,727.55
McDougal.	36.88	16.76	1.22								67.85
McDougal.	11,070.63	5,018.61	4,168.23	1,680.22	656.30	2,408.97				47.00	25,043.52
Patton.	606.71	215.95	72.00				51.34	26.17	10.09		11,891.08
Patton.	3,676.49	1,317.30	911.79	2,104.63	1,046.61	1,748.53				220.10	11,891.08
Paulding.	1,782.01	1,001.11	1,568.54	922.07	166.61	461.35					8,437.48
Parkins.	2,716.01	899.75	832.36	321.89	147.38	81.48					5,984.69
Perry.	4,263.51	1,384.92	1,538.64	8,701.76	3,727.07	2,727.07				41.50	27,122.92
Preble.	26,054.69	12,798.61	13,565.26	371.16	156.90	560.53	68.44	38.01	.92	31.61	56,878.53

Preston.....	2,446.36	1,009.31	8,726.18	917.13	409.00	494.63	1,600.00	15,537.81
Raid.....	4,184.01	1,077.55	8,830.73	527.37	217.99	312.71		17,768.98
Roe.....	3,985.02	1,639.55	8,968.69	8,357.63	2,960.96	2,848.79	41.50	28,612.13
Smith.....	6,967.16	3,760.65	11,572.59	6,264.30	2,507.64	9,967.81		40,041.37
Stett.....	9,990.61	3,905.32	7,444.34	1,806.32	435.31	1,184.64	365.10	24,469.54
Stewart.....	16,412.86	7,645.77	4,828.50	3,409.44	1,614.71	1,853.42		36,440.76
Terry.....	13,450.00	6,900.48	9,263.39	3,371.11	1,426.67	2,304.68	450.37	35,666.63
Tripp.....	1,778.37	786.12	503.51	2,469.17	1,278.64	789.68	41.50	7,646.99
Tuxton.....	3,216.81	1,660.64	966.34	243.06	99.67	141.62		6,304.64
Walke.....	10,401.73	3,893.90	2,736.91	1,487.03	616.20	720.69	76.37	20,172.83
Warrington.....	3,770.10	1,213.16	1,118.82	2,076.63	734.06	1,444.78	41.50	10,399.04
Whipple.....	1,187.11	583.76	1,637.83	21.86	10.12		2.65	2,466.46
Worden.....	2,841.69	1,280.60	744.42	1,726.60	624.54	4,660.21	1.48	11,876.96
<i>Torpedo boats.</i>								
Bagley.....	1,646.35	1,040.06	96.90	5.52	2.76			2,797.18
Bailey.....	8,404.43	5,319.01	1,819.76	1,338.15	977.99	542.96	4.78	18,352.29
Barney.....	1,173.81	6,697.39	73.39	5.52	2.76			1,932.87
Biddle.....	4,140.33	2,560.91	500.00	47.54	36.53	7.69		7,283.00
Blakely.....	213.75	66.09	82.88				96.38	721.93
Craven.....	108.04	43.22	47.07	7.76	3.10	247.15	15.68	209.19
Dahlgren.....	398.62	166.04	176.71					740.37
Davis.....	94.61	26.94	18.99					140.54
De Long.....	375.84	375.84	260.79					1,589.19
Dupont.....	631.93	243.63	130.59	37.96	13.02	9.57		1,066.15
Farragut.....	207.45	74.58	110.50					4,310.17
Goldsborough.....	1,837.61	823.48	700.31	132.55	62.23	13.26		3,562.34
MacKenzie.....	2,773.92	933.56	788.42	276.19	133.29	541.26		2,712.19
Manly.....	1,369.58	343.37	102.68					1,557.67
Morris.....	966.78	439.76	232.60	17.44	7.38	36.06		1,818.55
Rodgers.....	892.85	439.76	334.87	94.86	46.17	10.04		4,946.83
Shubrick.....	513.94	221.10	182.23	26.40	10.16	6.00		4,438.54
Somers.....	1,935.76	1,264.56	694.47				543.75	29.24
Stockton.....				26.68	9.47	5.97		433.55
Thornton.....	167.62	68.69	135.44	40.14	16.06	5.70		388.69
Thyng.....	162.13	65.97	126.13	22.04	8.81			178.72
Wilkes.....	103.86	41.43	27.38	4.32	1.78			
<i>Monitors.</i>								
Amphitrite.....	101.92	32.64	13.10	10,503.06	5,669.61	6,578.59		978.86
Cheyenne.....	6,231.44	2,795.84	4,788.27	32.02	12.81		181.77	36,658.48
Manitowoh.....								44.83
Monadnock.....	2,688.99	1,374.14	2,132.79	1,061.63	608.09	460.82		8,316.26
Monterey.....	5,531.55	2,997.92	2,176.72	3,544.73	236.92	88.96		11,388.80
Osark.....	10,423.66	4,408.45	5,385.97	3,122.50	1,799.33	2,845.93		27,066.94
Puritan.....	247.30	140.96	2.25	227.75	142.93	14.89		27,776.08
Tallahassee.....	1,686.52	662.61	597.85	171.15	104.09	44.94	24.38	3,881.20
Terror.....				4.15	4.15			14.64
Tonopah.....	10,019.61	6,068.65	3,924.07	2,993.54	1,824.69	1,485.80	200.01	26,262.35

STATEMENT B—Continued.
TABLE 4.—Statement showing expenditures for repairs to vessels (Title D)—Continued.

Ships.	Wear and maintenance.			Changes and additions.			Casualties.			Public vouchers.	Total.
	Labor.	Indirect.	Material.	Labor.	Indirect.	Material.	Labor.	Indirect.	Material.		
Submarines.											
A-1.....	\$68.20	\$30.59	\$9.06	\$24.73	\$9.65	\$6.84					\$149.07
A-2.....	1,451.26	316.88	610.14	1.76	.60	2.33					2,382.97
A-3.....	1,214.10	650.22	414.63	18.61	10.59	1.31					2,309.46
A-4.....	1,538.55	135.49	657.97	6.12	1.65	7.05					11,650.87
A-5.....	1,079.20	898.74	462.07	23.86	13.70	7.51				\$10,304.04	3,065.08
A-6.....	270.44	83.08	2,095.22	140.14	35.59	87.22					2,712.20
A-7.....	274.35	81.09	102.41	90.10	25.24	20.83					654.02
B-1.....	2,234.78	1,156.14	616.09	101.18	69.82	15.78				9,615.20	13,908.99
B-2.....	2,729.00	1,565.87	840.38	1.60	.56	1.44					4,138.85
B-3.....	3,240.18	725.80	1,188.59	24.88	9.13	1.32				11,016.73	16,211.63
C-1.....	42.23	14.78	8.20	43.62	21.04	20.83				19,333.26	19,418.75
C-2.....	1.80	1.90	239.47	2.98	1.81					14,695.59	14,937.85
C-3.....	5.42	3.36	2,005.16							14,840.23	16,854.17
C-4.....	17.15	8.30								14,702.11	14,702.11
C-5.....	27.16	17.15	8.30							11,367.48	11,367.48
D-1.....	4,102.37	2,433.99	1,057.99	1,976.52	1,140.22	410.31	\$30.10	\$23.61	\$10.37	10,386.88	8,852.68
D-2.....	3,710.22	2,155.86	878.28	2,038.30	1,204.68	402.64				50.00	13,260.77
D-3.....	3,606.27	2,075.61	692.22	1,416.02	320.49	342.07				2,000.00	11,380.34
E-1.....	5,114.45	2,821.31	899.45	1,984.11	598.81	2,913.64					22,080.51
E-2.....	4,338.32	2,406.38	1,745.20	465.44	324.17	100.83					20,830.70
F-1.....	10,999.37	4,766.54	3,362.78	886.19	440.00	1,726.68				140.80	7,928.48
F-2.....	10,633.54	4,743.07	3,134.12	986.13	277.60	1,647.24					15,902.63
F-3.....	3,000.38	1,344.74	1,880.11	363.27	177.42	1,622.76					8,185.62
F-4.....	2,205.65	2,991.63	2,793.46	600.60	291.16	1,420.43					211.84
G-1.....	3,217.28	1,023.81	3,148.63	527.90	228.28	44.02					78.96
G-2.....	151.43	41.28	15.12				2.26	1.24	.51	64.00	163.14
G-4.....	11.80	2.97								41.50	80.99
H-2.....	83.98	64.77	14.49	16.31	11.77	3.28					1,008.57
H-3.....	53.53	22.68					2.65	1.33			
K-1.....	676.78	196.37	122.67	6.38	3.97	2.60					
K-2.....											
Transports.											
Buffalo.....	8,451.68	3,877.74	4,408.58	2,209.80	945.48	1,417.52				38.44	21,086.24
General Alaya.....	1,784.70	1,024.45	12,245.67	40.39	30.88	32.14				384.66	185,017.84
Hancock.....	36,201.43	11,888.50	4,969.16	41,942.33	16,730.97	35,390.13				4.28	21,361.60
Hamblet.....	20,271.11	2,488.80	2,499.15	3,758.97	1,438.88	7,216.80				1,368.41	
Hamblet.....	10,271.11	2,488.80	2,499.15	3,758.97	1,438.88	7,216.80					

Gunboats.									
Annapolis	9,405.73	4,292.12	3,446.31	356.82	374.16	2,554.31			49.00
Callao									843.44
Castine	19,641.28	11,255.16	4,039.77	13,606.49	8,671.67	4,362.68			215.04
Dolphin	4,592.63	1,377.32	1,309.83	494.43	164.59	60.76			12.00
Don Juan de Austria									2,678.70
Dubuque	305.38	52.33	70.13						3,272.05
Elcano	46.56	11.93							1,600.20
Helena	53.26		667.14	1,577.31	501.31	824.50			3,845.17
Isla de Luzon	27,037.19	8,014.10	4,829.79	1,522.72	587.82	1,720.25	8.37		9,182.45
Machias	6,949.91	2,553.67	1,824.24	425.13	154.60	122.64			51,964.65
Marblehead	6,370.44	2,186.87	1,632.54	1,200.22	505.59	343.99			10,882.18
Nashville	6,972.10	2,811.31	2,625.46	1,202.37	71.61	282.36			14,597.17
Newport	2,842.62	1,004.68	1,757.52	1,086.31	449.42	777.22			6,203.16
Peddie	6,020.76	2,334.81	1,852.13	20.06	16.86				13,140.77
Pampanga	138.52	63.63							311.57
Panay	1,437.84	796.61	498.55						2,696.10
Petrel	4,407.96	1,523.00	2,137.75	948.68	494.09	200.82	102.12	4.52	9,856.82
Princeton	42.78	22.23	6.00			376.64			450.65
Quincy									63.29
Ranger	2,891.82	1,502.23	755.32	1,485.34	848.37	306.60			7,783.68
Samar									408.85
Sandoval									2,199.44
Vicksburg	2,094.28	1,042.30	710.83	89.17	50.94	111.96			4,099.47
Villalobos									3,162.72
Wheeling	1,820.04	885.51	16.87	26.56	13.78	239.44			48,463.91
Wilmington	14.96	2.99	21,415.00	89.38	26.27	119.57			11,518.59
Yorktown	4,043.65	2,025.75	4,647.08	241.66	117.72	432.09	6.48	2.59	26,795.74
								1.57	
Supply ships.									
Caltan	4,236.53	2,123.92	1,201.57	771.27	455.13	1,301.73	24.84	12.42	51.50
Culgoza	8,123.53	2,892.02	719.19	719.17	228.88	701.08			350.00
Glacier	7,730.96	3,287.72	3,750.63	222.33	109.99	242.18			116.00
Supply	2,652.40	1,241.06	2,625.27	234.72	125.56	608.44			55.78
Fuel ships.									
Abarenda	4,554.56	2,341.31	1,468.55	1,078.90	716.16	596.93	2,707.10	1,803.38	22.43
Ajax	3,681.37	1,767.00	2,353.31	600.63	426.89	721.05			543.59
Albatross	4,146.90	2,705.47	3,017.06	4,692.35	3,498.38	2,311.99	158.01	128.09	20,374.85
Brutus	12,924.71	5,593.24	4,318.71	4,318.71	961.26	913.76	250.51	142.05	26,786.51
Caesar	15,742.04	6,612.15	5,781.17	5,823.26	217.65	374.54			28,749.48
Cyclops	4,616.39	2,621.46	1,263.78	2,027.99	1,274.72	1,449.54			13,383.48
Hamnaul	4,401.17	1,716.37	1,791.60	4,423.65	2,196.90	2,055.54			17,297.93
Hector	6,788.00	2,463.13	1,972.66	431.63	177.62	243.24	20.43	7.51	12,525.74
Jason	2,578.03	1,454.58	62.48	62.48	94.02	125.08	4.40	2.04	2,582.77
Jupiter	2,448.99	1,038.05	2,312.45	374.79	235.16	132.06	4.33	3.56	2,683.52
Justin	8,855.36	3,726.12	3,704.74	374.74	159.14	349.46	2.16		18,102.46
Leontides	7,200.23	3,200.23	3,704.74	26,923.38	11,368.68	23,300.07			39,238.30
Mars	16,102.46	7,504.68	4,827.02	2,590.36	1,108.28	5,408.77			47,838.30
Nathan	19,512.41	8,694.81	10,571.41	2,590.46	1,108.28	1,586.29			47,689.02
Neptune	14,554.40	8,566.20	17,567.93	3,211.80	2,147.28		27.23	25.14	
								2.55	

STATEMENT B—Continued.

TABLE 4.—Statement showing expenditures for repairs to vessels (Title D)—Continued.

Ships.	Wear and maintenance.			Changes and additions.			Casualties.			Public vouchers	Total.
	Labor.	Indirect.	Material.	Labor.	Indirect.	Material.	Labor.	Indirect.	Material.		
Fuel ships—Continued.											
Nereus.....	\$2,498.93	\$1,698.20	\$1,941.34	\$2,324.73	\$1,305.97	\$2,808.24				\$49.00	\$12,572.41
Nero.....	17,001.46	8,565.27	4,502.80	1,370.32	768.62	2,260.88					34,518.35
Orion.....	1,339.65	746.88	593.93	166.65	106.01	108.23			\$181.37		3,321.46
Proteus.....	12,286.56	7,457.37	6,027.12	14,543.32	9,730.40	8,428.38		\$45.88			50,075.62
Saturn.....	19,706.63	9,811.92	6,415.24	5,490.51	3,248.23	4,468.68		3.04			49,140.21
Sterling.....	954.39	414.46	56.09	13.68	7.06						1,445.08
Vulcan.....	15,057.78	5,587.38	6,540.05	4,585.73	1,963.95	1,663.52				41.50	35,469.61
Converted yachts.											
Allen.....											526.25
Dorothea.....			818.33	276.62	121.55	65.30				526.25	948.60
Eagle.....	3,970.82	1,502.64	31.66	280.55	195.48	143.11					6,755.26
Florida.....	54.04	33.15		333.35	112.84	171.52	28.04	13.63	8.40		825.16
Gloucester.....	2,604.72	981.52	442.51								4,046.46
Hawk.....											2,013.09
Huntress.....											451.20
Mayflower.....	6,033.05	2,133.72	1,890.95	5,722.51	2,111.61	2,979.14					21,435.48
Onesida.....	8,315.46	1,412.81	888.58	472.92	189.01	93.71					6,372.49
Scorpion.....	14.94	10.46	8.36	62.07	30.10	368.33					7,442.47
Stranger.....				85.62	22.19	53.63					223.04
Sybil.....	1,553.56	526.09	214.93				80.84	31.41	7.81		2,415.24
Sylvia.....	1,940.88	709.17	393.76	52.84	19.02	14.61					3,171.78
Vixen.....	4,101.49	1,695.04	1,332.08	307.65	126.32	142.65				41.50	7,751.63
Wasp.....	5,869.64	1,500.30	796.03	323.52	93.67	149.55				46.50	8,205.61
Yankee.....	7,709.94	2,907.94	2,136.09	964.12	374.68	317.64					14,410.31
Tugs.											
Accomac.....	2,603.74	1,383.08	744.21	2,326.39	1,357.48	4,126.24					12,543.19
Active.....	436.19	1,138.55	164.87	43.80	21.20	65.00					4,538.61
Alice.....	2,218.50	1,235.04	1,044.16	19.24	11.64	9.48					4,838.36
Apache.....	1,544.09	651.06	263.41	84.06	36.50	2.90					2,477.02
Arcturion.....	2,950.98	894.62	443.17								4,241.61
Barclay.....	5,476.81	2,413.68	1,291.69	98.75	54.18	22.83	21.64	8.65	2.60		9,396.38
Berkshire.....	1,192.69	648.82	366.73	34.50	21.86	11.64					2,806.49
Birmingham.....	2,476.46	1,089.55	1,406.12	160.74	67.98	44.05					6,194.90

Iwawa.....	814.61	489.66	276.40	128.99	86.35	26.87						1,922.91
Massasoit.....	615.95	380.10	523.47	372.04	272.51							2,471.43
Modoc.....	180.91	280.42	482.93	180.91	226.34							2,020.00
Mohawk.....	3,413.70	2,032.76	956.13	262.44	166.69			55.58	40.20	13.11		7,024.05
Nacoele.....	1,375.20	402.61	356.23	632.31	183.95			247.06	126.92	81.99		3,637.52
Navajo.....	2,064.62	4.37	2,472.97									6,854.77
Ontario.....	2,063.10	643.50	1,959.66	847.58	363.02	409.05						6,327.89
Oscoda.....	1,231.45	349.91	614.26	65.95	19.01	94.10						2,589.68
Paisano.....	1,222.14	697.77	331.43	319.73	196.14	154.63		45.19	26.39	20.04		2,984.05
Patuxent.....	1,884.26	738.65	331.47	211.80	127.53	101.02		132.67	94.56	41.65		3,154.01
Pawnee.....	1,385.60	438.13	442.77	57.00	10.40	10.08		31.80	8.52			2,404.37
Pawnee.....	2,442.53	4,706.35	1,711.30	778.52	491.85	283.73						10,444.25
Pawnee.....	1,866.53	345.46	135.40	19.86	3.30							1,416.25
Pawnee.....	1,650.89	518.89	13.11	15.85	3.46							2,410.11
Pawnee.....	1,657.35	81.87	304.22	27.49	131.33	37.51		117.59				2,410.11
Pawnee.....	2,441.74	704.73	626.02	211.46	62.71	62.71						12,000.37
Pawnee.....	2,653.52	343.90	530.79	6.46	2.78	4.0		70.07	48.07	7.59		3,944.73
Pawnee.....	1,574.82	482.80	307.01	10.98	4.83							1,738.32
Pawnee.....	2.87	4.81	70.50									2,464.49
Pawnee.....	846.60	504.28	156.81	445.58	305.23	237.57		244.87	175.48	35.74		2,885.05
Pawnee.....	4,235.54	1,697.60	1,206.60	1,648.21	641.32	448.89						9,890.16
Pawnee.....	892.42	371.04	400.98									1,770.31
Pawnee.....	892.42	424.78	143.38	328.03	170.72	74.98						2,033.51
Pawnee.....	923.48	283.48	346.36	941.60	403.53	495.46			59.31	35.30		3,013.05
Pawnee.....	1,466.41	1,466.41	678.43	741.48	450.74	381.09						6,235.80
Pawnee.....	2,809.74	287.24	112.83									1,143.45
Pawnee.....	453.58	287.24	700.08									1,324.54
Pawnee.....	419.07	115.26	480.46	26.03	10.03	6.91						2,834.45
Pawnee.....	1,452.57	628.45	893.53	1,388.62	590.78	415.54						7,921.38
Pawnee.....	2,400.32	1,242.56	415.95	20.38	12.90	9.94						3,644.01
Pawnee.....	2,103.01	817.76	618.80	335.60	238.31	911.44		138.24	68.74	23.09		3,128.11
Pawnee.....	708.56	295.31	335.60	1,843.08	697.19	2,093.24						11,773.94
Pawnee.....	3,941.99	1,483.50	2,595.62	423.42	240.74	133.68		72.52	20.96	5.77		13,099.16
Pawnee.....	6,573.73	2,963.72	2,595.62	49.06	30.57	16.47		63.46	28.34	7.53		6,117.46
Pawnee.....	3,057.87	1,866.41	997.46									6,817.61
Pawnee.....	3,758.45	1,240.06	1,701.14	77.17	44.31	4.43						
<i>Tenders to torpedo vessels.</i>												
Alert.....	1,227.01	531.90	1,022.95	220.48	101.35	148.95						4,978.01
Dixie.....	4,289.65	1,550.74	3,045.11	1,252.36	535.64	3,793.36						19,227.59
Iris.....	1,496.30	967.79	1,500.98	51.86	27.63	226.24						4,080.80
Mohican.....	1,42.57	10.65	26.95									80.17
Pompey.....	1,641.49	804.88	1,434.00	325.62	207.03	149.94						4,562.96
Savannah.....	1,242.42	655.64	2,211.64	15.90	10.83	14.40						2,133.53

Tenders to torpedo vessels.

STATEMENT B—Continued.

TABLE 4.—Statement showing expenditures for repairs to vessels (Title D)—Continued.

Ships.	Wear and maintenance.			Changes and additions.			Casualties.			Public vouchers.	Total.
	Labor.	Indirect.	Material.	Labor.	Indirect.	Material.	Labor.	Indirect.	Material.		
Unserviceable for war purposes.											
Adams.....	\$668.56	\$220.37	\$145.46	\$62.04			\$6.56			\$41.50	\$1,043.39
Constitution.....	171.62		500.00								781.72
Cumtation.....	3.76	1.26	62.32								67.33
Cumberland.....	16.36	7.03	11.86	147.02	\$69.70	\$101.74				50.50	353.70
Franklin.....	28.70	21.44	25.14								128.78
Gopher.....											6,076.85
Granite State.....	28	.07	1.93				3,083.72	\$1,126.45	\$2,055.64		6,258.00
Hartford.....	1,392.77	619.82	2,814.50	332.11	128.01	1,316.86					6,604.07
Independence.....	183.71	64.44	183.71								248.18
Intrepid.....	328.93	118.24	278.45	362.60	155.79	408.96				49.00	1,731.97
Manila.....	80.32	31.96									112.30
Philadelphia.....	360.37	178.26	281.45	524.54	276.00	799.56				98.77	2,518.95
Reina Mercedes.....	52.16	26.08	25.98								695.72
Richmond.....	66.79	35.87	6.50				8.52	4.26			121.94
Southery.....	1,067.95	386.01	344.53								2,021.33
Topaka.....	1,639.38	710.56	533.04	105.76	44.36	72.72					2,882.98
Wolverine.....										575.33	575.33
Yantic.....										11,503.00	11,503.00
Special types.											
Lebanon (ammunition ship).....											
Panther (tender).....	2,777.44	1,701.56	944.11	6,458.83	4,650.61	1,712.50				41.50	18,286.54
Prometheus (repair ship).....	6,907.32	2,645.78	2,808.38								13,362.26
Relief (hospital ship).....	5,380.79	2,262.24	1,738.12	62,126.63	31,526.76	66,430.34	5.04	3.02			169,514.04
San Francisco (mine depot ship).....	2,179.72	1,078.49	1,537.38								4,795.59
Solace (hospital ship).....	1,085.45	362.15	678.58	261.94	197.10	140.11	43.73	20.65	23.74	61.00	2,874.43
Vestal (repair ship).....	15,764.67	5,071.92	4,800.47	3,358.47	962.16	1,990.48				423.35	32,960.92
Vesuvius (torpedo practice ship).....	5,990.15	2,768.45	3,287.29	17,485.59	8,996.17	20,418.95				75,178.14	134,126.04
Vesuvius (torpedo practice ship).....	2,166.26	1,390.03	843.80	582.45	360.69	225.79					6,578.02
Total.....	2,026,766.30	880,337.70	1,038,823.97	1,109,226.27	537,024.36	947,354.04	20,020.62	10,122.27	5,910.38	891,394.05	7,477,027.96

STATEMENT B—Continued.

TABLE 5.—Statement showing expenditures for repairs to equipage of vessels (Title P).

Ships.	Labor.	Indirect.	Material.	Public vouchers.	Total.
<i>Battleships, first line.</i>					
Arkansas	\$3,337.94	\$1,503.03	\$1,045.48	\$1,004.58	\$6,891.03
Delaware	3,485.51	1,981.52	1,103.83	614.10	7,187.96
Florida	4,324.82	1,811.03	1,217.17	232.53	7,585.55
Michigan	889.09	474.66	447.47	117.72	1,928.94
New York	381.02	182.02	77.54	.....	640.58
North Dakota	4,327.13	2,207.48	1,258.15	203.97	7,996.73
South Carolina	3,631.06	1,983.40	1,933.18	332.00	7,879.64
Texas	539.43	209.71	178.94	24.25	952.33
Utah	1,042.60	380.57	116.05	131.05	1,950.27
Wyoming	4,964.44	2,560.90	1,562.82	92.10	9,180.26
<i>Battleships, second line.</i>					
Alabama	297.14	133.03	107.95	43.10	581.22
Connecticut	3,929.07	1,245.18	1,108.55	171.31	6,454.11
Georgia	4,917.96	2,542.80	1,250.90	433.95	9,145.61
Idaho	2,558.88	1,425.90	963.30	372.71	5,320.79
Illinois	697.73	306.42	36.10	75	1,041.00
Indiana	67.02	26.57	28.86	12.00	134.45
Iowa	148.56	59.75	64.18	15.00	287.49
Kansas	2,596.62	909.41	522.21	267.30	4,285.54
Kearse	278.57	126.89	178.80	34.50	618.76
Kentucky	149.20	107.33	115.68	.....	372.21
Louisiana	1,539.73	828.15	1,419.45	85.04	3,872.37
Maine	795.74	352.27	151.41	99.63	1,399.05
Massachusetts	405.16	226.37	295.96	13.00	940.49
Minnesota	3,326.46	1,383.04	751.98	500.15	5,961.63
Mississippi	427.98	123.04	332.26	18.80	902.08
Missouri	1,942.03	907.79	490.25	93.11	3,433.18
Nebraska	429.20	190.44	52.45	181.60	853.69
New Hampshire	1,192.48	592.29	477.85	13.90	2,276.52
New Jersey	2,028.45	930.03	504.79	712.58	4,176.85
Ohio	101.70	54.89	174.10	154.57	485.26
Oregon	433.38	259.39	196.63	12.50	901.90
Rhode Island	2,962.72	1,899.44	1,873.72	373.31	8,109.19
Vermont	3,152.50	1,836.50	4,454.26	315.50	9,758.76
Virginia	2,059.88	985.05	648.16	322.15	4,015.24
Wisconsin	424.29	251.62	239.67	53.70	969.28
<i>Armored cruisers.</i>					
California	2,220.66	1,097.88	658.82	75.00	4,047.96
Colorado	4,692.78	2,653.82	3,244.41	224.15	10,815.16
Maryland	4,325.44	2,120.43	2,551.00	7.75	9,004.62
Montana	1,372.03	688.35	923.66	86.61	3,073.65
North Carolina	2,196.18	1,006.92	415.73	63.08	3,681.91
Pittsburgh	1,076.53	621.46	727.07	20.00	2,445.06
South Dakota	3,080.32	1,552.92	1,018.19	31.82	5,678.25
Tennessee	3,291.30	1,358.94	742.37	241.75	5,634.36
Washington	2,011.38	729.02	984.69	348.17	4,073.26
West Virginia	1,928.28	1,024.74	2,217.15	154.94	5,325.11
<i>Cruisers, first class.</i>					
Brooklyn	67.26	50.32	9.32	.....	126.90
Charleston	1,063.57	722.15	2,802.69	98.75	4,674.56
Milwaukee	767.18	488.05	198.49	41.00	1,494.72
Saratoga	724.22	261.42	337.04	299.93	1,642.61
St. Louis	894.50	519.91	166.87	47.75	1,629.03
<i>Cruisers, second class.</i>					
Chicago	370.44	188.61	80.80	71.30	711.15
Columbia	81.52	27.61	.69	.....	109.82
Minneapolis	25.28	8.83	.....	.....	34.11
Newark	1.52	.84	6.24	.....	8.60
Olympia	680.72	254.16	235.03	2.70	1,172.61
<i>Cruisers, third class.</i>					
Albany	534.54	335.78	267.86	31.67	1,169.85
Birmingham	440.50	199.60	78.20	33.90	750.20
Boston	10.94	7.21	3.50	.....	21.65
Chattanooga	544.92	349.95	111.30	57.25	1,063.42
Chester	106.59	41.83	.....	12.00	160.42
Cincinnati	745.83	285.56	343.65	59.00	1,445.04
Cleveland	545.94	269.70	241.75	45.00	1,097.39
Denver	1,079.07	554.56	354.69	23.00	2,022.32
Des Moines	1,417.88	600.12	657.89	87.00	2,742.39
Galveston	621.39	319.74	281.84	14.00	1,236.97
Marblehead	1,651.42	762.39	199.22	.....	2,613.03
Montgomery	1,940.07	748.57	538.32	58.23	3,285.19
New Orleans	1,274.50	682.22	576.51	.....	2,533.23
Raleigh	19.47	11.12	9.15	.....	39.74
Salem	124.08	47.70	30.19	70.00	271.97
Tacoma	1,144.77	468.39	200.99	83.00	1,897.15

STATEMENT B—Continued.

TABLE 5.—Statement showing expenditures for repairs to equipage of vessels (Title P)—Continued.

Ships.	Labor.	Indirect.	Material.	Public vouchers.	Total.
<i>Destroyers.</i>					
Ammen	\$201.48	\$112.43	\$30.31	\$12.75	\$462.97
Aylwin	10.81	1.58			12.39
Bainbridge	20.80	12.67	10.73	27.50	81.50
Belch	26.59	8.40			44.99
Barry	181.22	46.39	39.50	4.00	251.11
Beale	284.55	192.21	125.10		717.11
Benham	178.79	24.26	21.20	5.25	222.25
Burrows	210.32	70.94	29.45	21.00	231.71
Cassin	133.19	13.88	58.93		206.00
Chauncey	95.14	41.03	17.63		153.80
Cummings	58.92	15.06	56.27		122.25
Dale	95.24	48.32	13.34		156.90
Decatur	8.40	3.90			12.30
Drayton	205.80	145.89	32.09	4.85	490.23
Duncan	119.12	38.29	87.13		244.54
Fanning	202.66	105.57	70.10	25.68	404.99
Flusser	182.68	66.90	62.34	5.00	264.22
Henley	170.19	62.90	30.99	20.00	282.08
Hopkins	562.76	490.83	152.88	6.50	1,212.97
Hull	58.51	31.87	15.14		105.52
Jarvis	482.10	271.52	264.14	3.00	1,020.76
Jenkins	194.63	114.77	102.24	14.25	425.89
Jocett	117.09	73.85	137.30	11.50	339.74
Lamson	31.06	14.53	8.99		54.58
Lawrence	191.90	100.94	45.56	10.00	347.80
MacDonough	72.61	31.83	9.99		113.99
Mayrant	359.44	145.02	103.86	28.10	636.42
McCall	259.70	110.50	79.30	85.50	494.90
Monaghan	410.00	180.95	112.43	24.00	727.38
Parker	65.50	31.22	56.71		153.43
Patterson	424.28	164.89	65.72	33.50	688.39
Paulding	145.66	44.28	189.48	33.50	412.92
Paul Jones	642.98	319.01	82.95		1,044.94
Parkins	79.45	5.10	54.13	12.00	150.68
Perry	234.90	114.44	47.84	15.00	412.18
Preble	772.31	375.67	199.08		1,347.06
Preston	222.72	84.28	51.47		358.47
Ridd	379.86	143.06	51.93	5.00	580.85
Roe	213.18	64.72	59.43	15.00	352.33
Smith	286.32	119.12	443.86	13.70	859.00
Sterett	487.09	143.27	173.99	20.00	824.35
Stewart	647.81	303.58	456.18	14.50	1,422.07
Terry	869.57	273.88	167.43	6.00	1,316.88
Trippe	518.35	178.08	105.54		801.97
Truxtun	747.29	378.84	140.45	3.50	1,270.08
Walke	418.71	154.04	214.10	8.00	794.85
Warrington	307.99	126.46	115.23	7.25	556.93
Whipple	196.11	106.47	60.84		363.42
Worden	216.40	120.26	65.44	15.25	417.35
<i>Torpedo boats.</i>					
Bagley	39.06	27.63	90.39		157.07
Bailey	445.11	243.19	212.72	15.00	916.02
Barney	36.75	24.19	23.98	6.50	91.42
Biddle	121.09	72.90	23.21	24.25	241.45
Blakely	1.93	.73			2.66
Dupont	1.99	.74			2.73
Farragut	245.98	134.98	32.36		413.32
Fox			.34		.34
Goldborough	220.43	125.20	40.98		386.61
Morris	1.95	.81			2.76
Rodgers	1.75	.92			2.67
Stringham	90.56	56.09	2.13	6.00	154.78
<i>Monitors.</i>					
Amphitrite				15.00	15.00
Cheyenne	498.29	255.42	125.89	40.75	920.35
Monadnock	74.53	51.78	4.03		130.34
Monterey	314.63	179.15	86.77		580.55
Ozark	180.37	93.46	47.14	40.00	360.97
Tallahassee	350.23	115.89	262.00	6.75	734.57
Tonopah	456.24	284.40	52.88	77.78	871.30
<i>Submarines.</i>					
A-2	38.41	7.61	28.11		74.13
A-3	49.86	30.49	12.56		92.91
A-4	34.39	20.24	9.42		64.05
A-5	15.03	9.23	12.78		37.04

STATEMENT B—Continued.

TABLE 5.—Statement showing expenditures for repairs to equipage of vessels (Tile P)—Continued.

Ships.	Labor.	Indirect.	Material.	Public vouchers.	Total.
<i>Submarines—Continued.</i>					
A-6.....	\$23.56	\$5.26	\$3.85	.....	\$32.67
A-7.....	16.96	7.14	.....	.....	24.10
B-2.....	189.46	38.60	40.68	.....	268.74
B-3.....	229.68	51.68	61.72	\$3.00	345.93
C-4.....	24.96	12.48	1.33	.....	37.77
C-5.....	.....	2.91	.....	.....	2.91
D-1.....	8.20	5.47	.....	.....	13.67
D-2.....	50.06	27.42	3.99	6.43	87.90
D-3.....	5.04	2.75	8.00	26.59	42.38
E-1.....	417.37	109.24	352.11	.....	878.72
E-2.....	273.54	130.96	27.70	.....	432.20
F-1.....	165.64	67.12	14.74	6.00	253.50
F-2.....	238.93	103.68	8.05	15.00	365.66
F-3.....	179.90	78.35	6.51	.....	264.76
F-4.....	164.33	69.37	27.61	.....	261.31
G-1.....	193.16	59.53	107.26	.....	359.95
G-2.....	65.88	27.85	38.69	.....	94.42
H-1.....	164.15	73.89	38.96	.....	277.00
H-2.....	188.38	84.59	38.25	.....	311.22
H-3.....	92.46	64.87	16.22	.....	173.55
K-2.....	21.16	.....	.....	.....	21.16
<i>Transports.</i>					
Buffalo.....	2,369.13	1,218.25	1,702.01	64.15	5,353.54
General Alava.....	28.88	7.22	.60	.....	36.70
Hancock.....	581.93	255.03	129.79	83.00	1,049.75
Prairie.....	298.61	140.51	46.79	78.90	564.81
Rainbow.....	618.93	357.79	129.24	30.59	1,136.55
<i>Gunboats.</i>					
Annapolis.....	805.19	438.51	282.46	12.00	1,538.16
Castine.....	1,369.21	671.82	255.14	18.80	2,314.97
Concord.....	.....	.....	2.15	.....	2.15
Dolphin.....	133.82	44.16	17.49	152.70	348.17
Dubuque.....	.....	.....	.....	41.75	41.75
Elcano.....	.96	.67	4.80	26.97	33.40
Helena.....	.....	.....	.....	397.30	397.30
Isla De Luzon.....	1,773.94	740.45	559.14	.....	3,073.53
Machias.....	394.11	180.08	100.83	.....	674.97
Marletta.....	1,034.33	504.69	231.73	3.00	1,773.75
Nashville.....	430.33	177.08	203.45	.....	810.81
Newport.....	31.32	8.47	.....	.....	39.79
Paducosh.....	1,071.34	404.14	222.88	110.90	1,809.26
Pampanga.....	79.96	30.60	24.73	.....	135.29
Petrel.....	474.56	180.97	165.85	33.75	855.13
Princeton.....	57.63	27.84	10.54	.....	96.01
Quiros.....	.....	.....	.....	34.15	34.15
Ranger.....	492.20	294.46	103.02	.....	889.68
Sacramento.....	265.12	139.96	92.49	5.00	502.56
Samar.....	.....	.....	.....	11.92	11.92
Vicksburg.....	14.70	8.33	.32	.....	23.35
Villalobos.....	.....	.....	.....	32.28	32.28
Wheeling.....	.82	.34	2.00	.....	16.66
Wilmington.....	7.28	1.82	.....	232.23	241.33
Yorktown.....	177.62	92.24	62.29	59.95	392.10
<i>Supply ships.</i>					
Celtic.....	330.67	183.58	120.32	10.00	644.57
Culgoa.....	684.87	632.86	156.25	156.25	1,767.53
Glacier.....	615.73	263.12	451.44	21.65	1,352.94
Supply.....	166.92	89.11	171.38	26.52	453.93
<i>Fuel ships.</i>					
Abarenda.....	310.55	150.28	66.92	.....	527.75
Ajax.....	133.74	65.81	14.69	.....	214.24
Arethusa.....	180.41	90.61	80.69	10.00	341.71
Brutus.....	412.54	172.44	100.43	.....	685.41
Cæsar.....	508.30	214.02	116.93	29.25	868.50
Cyclops.....	590.65	329.36	761.39	.....	1,681.40
Hannibal.....	1,869.06	708.91	371.89	299.17	3,249.03
Hector.....	42.93	22.13	10.15	.....	75.21
Jason.....	117.80	44.84	67.50	.....	219.14
Jupiter.....	443.24	215.91	71.70	2.25	734.10
Justin.....	211.96	110.22	74.80	.....	396.98
Leonidas.....	590.60	309.41	179.86	.....	1,069.87
Mars.....	66.06	29.16	13.44	59.50	168.16
Nanshan.....	124.59	57.07	104.39	.....	286.06
Neptune.....	578.66	360.40	915.71	29.00	1,883.77
Nereus.....	56.61	32.86	31.29	.....	120.76

STATEMENT B—Continued.

TABLE 5.—Statement showing expenditures for repairs to equipage of vessels (Title P)—Continued.

Ships.	Labor.	Indirect.	Material.	Public vouchers.	Total.
<i>Fuel ships—Continued.</i>					
Nero.....	\$433.06	\$344.02	\$99.97	\$12.00	\$889.05
Orion.....	659.63	374.83	735.05		1,769.51
Proteus.....	205.62	130.65	178.06		514.33
Return.....	514.38	394.40	232.59		1,141.37
Steering.....	17.30	9.81	2.63		29.74
Vulcan.....	199.50	75.31	21.82	44.25	339.88
<i>Converted yachts.</i>					
Eagle.....	607.18	227.09	100.70	170.61	1,105.58
Florida.....	61.69	38.31	26.83		126.83
Gloucester.....	24.21	10.78	3.89	1.50	40.38
Mayflower.....	1,055.62	490.85	294.35	242.55	2,083.37
Onesida.....				2.50	2.50
Scorpion.....	1.50	.82	6.24	40.72	48.28
Sylvia.....	15.68	9.48	3.16		28.32
Syph.....	348.47	153.94	62.62		565.03
Vixen.....	243.83	114.29	121.96	247.75	727.83
Wasp.....	153.37	68.60	27.87		249.84
Yankton.....	1,665.60	721.85	519.50	57.65	2,964.60
<i>Tugboats.</i>					
Fortune.....	216.48	116.23	53.24	10.09	395.94
Heracles.....				6.50	6.50
Iroquois.....	78.91	35.37	2.49		116.77
Iwawa.....	3.76	1.88	.42	3.00	9.06
Mohoc.....	10.78	3.86	1.50		16.14
Mohawk.....	3.96	2.77	.06		6.79
Navajo.....				9.50	9.50
Ontario.....	278.07	121.09	47.80	1.50	448.46
Osceola.....	85.44		35.76		121.20
Pataasco.....	23.08	13.05	7.39	22.50	66.02
Patuxent.....	14.91	12.37	9.40		36.68
Peoria.....	147.62		23.48	10.00	181.10
Piscataqua.....	193.26	77.67	96.01	2.00	368.94
Potomac.....	22.24	10.78	3.87	16.83	53.72
Ramoseet.....	11.28	4.13	1.50		16.91
Sonoma.....	21.62	6.61			28.23
Uncas.....	8.70	2.18	92.00	12.00	114.88
Vigilant.....	71.53	46.17	10.87		128.57
Wompatuck.....	10.96	6.68	4.50		22.14
<i>Tenders to torpedo vessels.</i>					
Alert.....	276.64	129.56	126.23	66.84	599.27
Dixie.....	119.60	37.67	50.60	139.54	337.50
Iris.....	80.93	40.40	14.78	130.45	266.56
Mohican.....	264.76	60.97	342.98	7.50	676.21
Pompey.....	121.64	53.90	58.79	44.00	278.33
Seyern.....	171.65	90.81	63.02	56.28	381.76
<i>Unserviceable for war purposes.</i>					
Adams.....	88.45	30.00	19.56		138.01
Constellation.....	4,562.87			398.75	4,961.62
Cumberland.....	11.52	5.38	10.11		27.01
Franklin.....	61.35	35.76	27.44	126.45	251.00
Granite State.....	190.52	93.18	519.74		803.44
Hartford.....	25.70	10.66	1.05	42.00	79.41
Intrepid.....	13.27	6.99	.98	64.30	85.54
Philadelphia.....	202.38	99.31	30.44		332.13
Portsmouth.....	47.56	18.74	10.00		76.30
Reina Mercedes.....	27.40	12.27	11.77	35.75	87.19
Southery.....	2.53	1.24	.47		4.24
<i>Special type.</i>					
Lebanon.....	61.68	35.93	32.06	17.00	146.67
Panther.....	640.11	342.82	137.48	85.81	1,206.22
Prometheus.....	373.02	208.50	177.70		759.22
San Francisco.....	463.43	323.01	119.93	13.74	920.11
Solace.....	180.16	62.56	66.98	28.39	338.09
Vestal.....	1,979.84	941.46	1,502.06	424.60	4,865.96
Vesuvius.....	728.46	273.00	45.80		1,047.26
Total.....	165,643.97	76,792.90	67,922.64	14,842.11	325,201.62

STATEMENT B—Continued.

TABLE 6.—Statement showing expenditures for maintenance and improvements at the several navy yards and stations.

Yards and stations.	Title E, real estate and chattels, Industrial.	Title F, machinery, plant, Indus- trial.	Title R, real estate and chattels, military.	Title G, maintenance, Industrial.	Title S, maintenance, military.	Total, labor indirect, material, pub- lic vouchers, and pay.
Portsmouth, N. H.						
Labor.....	\$31,524.04	\$4,995.67	\$12,626.69	\$91,753.44	\$106,844.99	\$247,444.83
Indirect.....	10,568.97	1,922.84	5,107.78	5,890.82	8,113.02	31,603.43
Material.....	18,585.81	5,098.16	33,381.83	11,701.65	38,867.14	107,622.59
Public vouchers.....	151,481.10	18,044.76	22,242.77	2,639.36	15,809.92	210,217.90
Pay and allowances.....				72,039.29	60,079.49	141,118.78
Total.....	212,159.92	29,749.43	73,356.07	194,024.56	288,714.56	738,007.53
Boston, Mass.						
Labor.....	47,908.42	16,174.55	15,363.69	205,742.28	205,537.24	490,727.18
Indirect.....	16,761.77	7,865.36	6,622.33	28,382.96	15,949.42	75,571.83
Material.....	28,013.35	14,928.15	20,804.57	26,905.21	34,426.49	126,078.77
Public vouchers.....	61,485.30	11,203.54	52,521.45	11,200.32	54,468.42	190,879.03
Pay and allowances.....				81,311.60	105,901.42	187,213.02
Total.....	154,159.84	50,169.59	95,312.04	353,542.37	416,285.99	1,099,490.83
New York, N. Y.						
Labor.....	51,685.57	22,839.15	16,739.85	508,409.04	389,618.70	990,292.31
Indirect.....	19,179.67	7,363.16	6,986.56	40,204.01	24,704.26	98,467.66
Material.....	52,539.22	26,203.73	54,192.06	58,034.43	73,943.75	264,216.19
Public vouchers.....	253,488.83	44,520.76	15,461.86	8,626.94	107,889.92	429,938.31
Pay and allowances.....				159,325.27	186,879.61	346,204.88
Total.....	377,193.29	100,969.80	93,380.33	774,599.69	782,986.24	2,136,119.35
Philadelphia, Pa.						
Labor.....	62,564.86	8,019.04	25,122.87	163,881.82	307,553.44	567,141.03
Indirect.....	19,444.26	3,382.19	12,686.09	12,000.82	56,347.86	93,783.02
Material.....	89,552.33	16,764.61	42,239.97	29,233.82	33,373.25	213,163.88
Public vouchers.....	101,194.47	54,094.16	129,022.39	3,838.46	51,281.61	339,431.09
Pay and allowances.....				129,124.63	84,877.53	194,002.16
Total.....	272,755.92	84,269.89	205,220.14	338,764.42	469,085.65	1,370,086.02
Washington, D. C.						
Labor.....	47,633.40	70,399.64	3,190.85	191,621.01	213,687.93	526,522.83
Indirect.....	8,714.53	31,948.87	19,922.65	19,922.65	17,353.99	89,497.26
Material.....	38,974.12	49,821.49	28,916.22	46,884.84	41,158.03	196,752.03
Public vouchers.....	104,184.65	306,357.77	15,302.40	6,624.34	101,567.73	542,178.89
Pay and allowances.....				74,431.31	93,571.01	168,002.32
Total.....	199,356.70	450,747.77	46,077.02	341,444.15	468,874.69	1,566,500.33

STATEMENT B—Continued.

TABLE 6.—Statement showing expenditures for maintenance and improvements at the several navy yards and stations—Continued.

Yards and stations.						
	Title E, real estate and chattels, Industrial.	Title F, machinery, plant, indus- trial.	Title B, real estate and chattels, military.	Title G, maintenance, Industrial.	Title S, maintenance, military.	Total, labor, indirect, material, pub- lic vouchers, and pay.
Norfolk, Va.	Labor.....	\$30,416.92	\$35,422.75	\$35,226.81	\$220,126.06	\$563,273.23
	Indirect.....	16,786.50	16,232.53	20,279.05	110,404.28	110,404.28
	Material.....	32,583.91	37,598.39	114,734.39	71,071.74	289,955.05
	Public vouchers.....	83,661.58	82,660.06	19,333.38	91,023.66	292,862.14
	Pay and allowances.....	163,448.91	162,913.41	186,572.63	519,543.84	1,455,680.78
Charleston, S. C.	Total.....	14,385.88	3,459.81	8,393.19	62,654.42	148,961.64
	Labor.....	4,273.71	1,294.83	3,287.16	8,840.71	22,594.60
	Indirect.....	14,228.80	14,888.17	26,524.67	30,194.19	98,599.63
	Material.....	63,681.09	12,126.58	938.25	10,206.27	87,009.94
	Pay and allowances.....	96,699.48	31,790.39	38,135.27	47,467.61	90,550.07
Mare Island, Cal.	Total.....	38,553.54	19,308.35	37,660.48	224,583.63	584,360.62
	Labor.....	13,450.06	7,293.45	9,928.46	20,348.69	84,942.37
	Indirect.....	41,261.80	46,074.72	44,293.31	35,923.61	314,962.72
	Material.....	101,834.14	9,314.91	5,860.81	3,096.35	186,252.12
	Pay and allowances.....	196,099.54	80,998.43	87,721.06	131,920.04	218,642.96
Puget Sound, Wash.	Total.....	34,962.85	19,595.24	40,330.97	143,495.11	399,386.74
	Labor.....	13,967.87	8,860.51	13,165.72	21,167.49	84,331.94
	Indirect.....	37,272.18	21,490.06	94,778.04	49,096.62	235,965.04
	Material.....	262,320.23	85,288.43	34,790.59	38,873.19	402,938.43
	Pay and allowances.....	338,494.13	185,264.24	177,774.32	81,006.72	1,271,268.68
Olongapo, P. I.	Total.....	5,268.75	1,986.32	4,532.18	59,681.90	167,007.12
	Labor.....	2,378.13	897.12	2,675.67	41,864.48	45,696.89
	Indirect.....	6,448.82	7,367.12	9,231.06	17,790.83	107,894.95
	Material.....	4,667.65	7,961.86	1,886.99	32,622.30	167,418.07
	Pay and allowances.....	21,262.46	18,126.72	17,466.29	317,192.88	557,440.68

Cavite, P. I.	Labor.....	8.90	713.06	43,297.08	86,064.00	135,063.04
	Indirect.....	1.58	178.14	1,232.49	6,182.03	6,594.24
	Material.....	194.07	4,641.72	14,424.25	53,059.27	71,319.31
	Public vouchers.....		306.06		8,519.87	9,639.64
	Pay and allowances.....	204.65	5,807.09	23,630.35	199,278.07	222,804.42
	Total.....			88,019.60	351,103.24	445,440.65
Port Royal, S. C.	Labor.....				2,878.30	2,878.30
	Material.....		24,486.98		48,994.92	73,480.90
	Public vouchers.....		92.88		64,798.84	64,891.72
	Pay and allowances.....				70,014.43	70,014.43
	Total.....		24,578.86		186,686.49	211,265.35
Key West, Fla.	Labor.....		15.83	5,147.65	102,508.16	107,671.64
	Material.....		1,807.26	1,538.76	45,700.80	49,087.82
	Public vouchers.....		5,027.40		980.36	6,007.76
	Pay and allowances.....				27,370.52	27,370.52
	Total.....		6,850.49	6,677.41	176,559.84	190,067.74
Pensacola, Fla.	Labor.....				14,711.35	14,711.35
	Material.....		8,887.43		422.39	9,319.82
	Public vouchers.....		1,670.84		4,605.44	6,276.28
	Pay and allowances.....		10,668.27		19,738.18	30,307.45
	Total.....				21,287.41	21,287.41
New Orleans, La.	Labor.....			1.90	1,166.96	1,168.86
	Material.....				2,571.66	2,571.66
	Public vouchers.....			1.90	25,086.03	25,087.93
	Pay and allowances.....					
	Total.....				21,287.41	21,287.41
Guantanamo, Cuba.	Labor.....	9,784.01	58,115.41	11,938.88	115,110.82	194,929.12
	Material.....	1,381.71	85,151.76	3,967.20	78,444.76	138,935.43
	Public vouchers.....		106,280.97		267.70	106,508.67
	Pay and allowances.....				21,662.76	21,662.76
	Total.....	11,145.72	215,558.14	15,906.08	215,476.03	461,073.97
Naragansett Bay, R. I.	Labor.....		13,288.07		70,410.41	83,698.48
	Material.....		8,523.45		12,786.88	21,283.33
	Public vouchers.....		21,811.52		83,170.29	104,981.81
	Pay and allowances.....					
	Total.....				85,459.48	924,125.85
Pearl Harbor, Hawaii.	Labor.....		237,128.32	1,538.06	24,015.43	239,111.81
	Material.....		212,000.01	185.10	27,493.48	239,511.33
	Public vouchers.....		914,005.90		45,928.24	960,934.14
	Pay and allowances.....					
	Total.....		1,363,734.23	1,663.24	103,012.81	1,568,440.28
Tutuila, Samoa.	Labor.....		18.98		31,390.51	31,409.49
	Material.....		5,109.11		18,924.53	24,033.64
	Public vouchers.....				270.35	270.35
	Pay and allowances.....				69,812.85	69,812.85
	Total.....		5,188.09		120,387.24	125,555.33

STATEMENT B—Continued.

TABLE 6.—Statement showing expenditures for maintenance and improvements at the several navy yards and stations—Continued.

Yards and stations.	Title E, real estate and chattels, Industrial.	Title F, machinery, plant, indus- trial.	Title B, real estate and chattels, military.	Title G, maintenance, Industrial.	Title S, maintenance, military.	Total, labor, indirect, material, pub- lic vouchers, and pay.
Guam, M. I.	Labor..... Material..... Public vouchers..... Pay and allowances..... Total.....		\$8,559.24 22,408.95 1,061.75 32,029.94		\$51,064.06 38,289.40 2,225.24 73,891.35 160,570.05	\$59,623.30 55,096.35 3,386.99 73,891.35 192,596.99
Torpedo station, Rhode Island.	Labor..... Material..... Public vouchers..... Pay and allowances..... Total.....	\$2,000.86 2,000.86	1,884.03 6,736.68 195,798.86 204,409.57		170,191.79 116,817.50 20,248.12 57,853.47 365,110.88	172,076.82 125,644.04 216,046.98 57,853.47 571,620.31
Training station, Rhode Island.	Labor..... Material..... Public vouchers..... Pay and allowances..... Total.....		1,421.08 3,276.57 73,404.61 78,102.26		37,890.88 47,237.49 80,386.08 150,457.15 306,011.70	29,381.46 80,514.06 153,791.29 180,457.15 384,113.96
Training station, Great Lakes.	Labor..... Material..... Public vouchers..... Pay and allowances..... Total.....	\$214.85 214.85	988.70 6,139.62 13,246.30 20,374.62		51,019.37 88,763.96 16,283.44 184,174.40 290,241.17	52,008.07 45,118.43 29,529.74 184,174.40 310,890.64
Training station, California.	Labor..... Material..... Public vouchers..... Pay and allowances..... Total.....		401.92 5,736.40 9,565.00 15,698.22		41,642.68 37,683.80 4,960.37 113,666.94	42,044.60 45,276.20 14,246.37 139,266.66
Naval proving ground, Indianhead, Md.	Labor..... Material..... Public vouchers..... Pay and allowances..... Total.....		22,640.46 85,484.31 17.40 108,142.17		129,288.47 147,087.86 24,328.70 337,868.97	151,998.93 229,591.18 24,328.10 371,122.65 446,028.84

Naval magazine, Hingham, Mass.	Labor..... Material..... Public vouchers..... Total.....	6,222.88 3,143.18 38,406.61 44,780.67	30,846.84 6,798.32 6,711.04 43,356.20	37,082.22 11,941.70 44,121.25 93,132.17
Naval magazine, Iona Island, N. Y.	Labor..... Material..... Public vouchers..... Total.....	20,505.81 10,642.48 5,200.46 36,348.75	78,385.05 10,798.18 24,768.98 108,952.21	98,991.78 37,654.48 6,998.35 142,644.61
Naval magazine, Dover, N. J.	Labor..... Material..... Public vouchers..... Total.....	5,828.89 7,284.89 567.00 13,680.78	40,227.25 12,241.81 511.26 52,780.32	46,055.62 19,526.90 578.26 66,160.78
Naval magazine, Fort Lafayette, N. Y.	Labor..... Material..... Public vouchers..... Total.....	165.00 4,739.39 4,904.39	10,818.78 1,314.69 50.50 12,183.97	10,818.78 1,479.69 4,789.89 17,088.26
Naval magazine, Fort Mifflin, Pa.	Labor..... Material..... Public vouchers..... Total.....	1,782.78 2,009.70 3,792.48	32,918.90 9,486.44 9,848.13 42,752.47	32,918.90 11,268.22 2,357.53 46,544.65
Naval magazine, Norfolk, Va.	Labor..... Material..... Public vouchers..... Total.....	6,925.98 6,446.69 25,680.53 39,053.20	40,502.24 14,686.46 230.02 55,418.71	47,428.22 21,143.14 25,900.55 94,471.91
Naval magazine, Mare Island, Cal.	Labor..... Material..... Public vouchers..... Total.....	3,925.66 6,730.02 1,982.69 12,638.37	54,294.87 9,528.57 1,982.69 68,813.44	58,220.53 16,263.69 1,982.69 76,466.91
Naval magazine, Puget Sound, Wash.	Labor..... Material..... Public vouchers..... Total.....	5,294.91 3,155.42 28,085.63 36,415.96	17,398.74 2,027.24 28,085.63 19,441.50	22,028.65 5,152.66 28,051.15 55,232.46
Naval magazine, Kuaeha, Hawaii.	Labor..... Material..... Public vouchers..... Total.....	120,712.50	120,712.50	120,712.50
Naval magazines, Philippine Islands.	Labor..... Material..... Public vouchers..... Total.....	26,014.29 11,779.18 36,793.47	26,014.29 11,779.18 36,793.47	26,014.29 11,779.18 36,793.47
Naval coal depot, Frenchmans Bay, Ma.	Labor..... Material..... Public vouchers..... Total.....	1,306.58	1,306.58	1,306.58
Naval coal depot, Melville Station, B. I.	Labor..... Material..... Public vouchers..... Total.....	26,512.42 9,896.46 3,040.01 39,448.89	26,512.42 9,896.46 3,040.01 39,448.89	26,512.42 9,896.46 18,711.08 54,119.96

STATEMENT B—Continued.

TABLE 6.—Statement showing expenditures for maintenance and improvements at the several navy yards and stations—Continued.

Yards and stations.	Title E, real estate and chattels, industrial.	Title F, machinery plant, indus- trial.	Title R, real estate and chattels, military.	Title G, maintenance, industrial.	Title S, maintenance, military.	Total, labor, indirect, material, pub- lic vouchers, and pay.
Naval coal depot, New London, Conn.	Labor..... Material..... Public vouchers..... Total.....				\$3,783.88 347.16 318.81 4,452.85	\$3,786.88 347.16 318.81 4,452.85
Naval coal depot, Pichilingue, Mexico	Material..... Public vouchers..... Total.....		\$1,662.66 1,662.66		867.12 617.04 1,484.16	2,529.78 617.04 3,146.82
Naval coal depot, San Diego, Cal.	Labor..... Material..... Public vouchers..... Total.....		199.38 18,258.62 13,416.00	\$3,227.40	200.50 11,448.37 11,708.77	3,227.40 419.88 29,704.89 33,352.17
Naval coal depot, Tiburon, Cal.	Labor..... Material..... Public vouchers..... Total.....		4,508.55 2,044.76 6,553.31	42,932.74	10,553.45 1,307.80 11,861.38	42,932.74 15,062.03 3,352.66 61,367.43
Naval hospital, Las Animas, Colo.	Labor..... Material..... Public vouchers..... Pay and allowances..... Total.....		52.28 1,907.86 2,081.14		34,489.48 3,306.75 120,018.91 43,418.77 200,236.86	34,489.48 3,456.06 127,684.81 45,418.77 205,341.12
Naval hospital, Sitka, Alaska.	Material..... Public vouchers..... Total.....				290.55 31.33 321.88	290.55 31.33 321.88
Naval hospital, Yokohama, Japan.	Material..... Public vouchers..... Pay and allowances..... Total.....				48.70 8,628.82 21,347.75 29,925.27	48.70 8,628.82 21,347.75 29,925.27

Naval War College, Newport, R. I.	Lebor.....	14,400.71				14,400.71
	Material.....	7,795.76				7,795.76
	Public vouchers.....	7,795.80				7,795.80
	Total.....	3,047.79				3,047.79
Naval clothing factory New York, N. Y.	Material.....					546.60
	Total.....					546.60
Naval clothing depot, New York, N. Y.	Lebor.....	47,495.93				47,495.93
	Material.....	4,901.54				4,901.54
	Total.....	52,487.47				52,487.47
Pacific coast torpedo station	Public vouchers.....	60,801.39				60,801.39
Naval Home, Philadelphia, Pa.	Lebor.....	39,780.09				39,780.09
	Public vouchers.....	45,180.32				45,180.32
	Pay and allowances.....	57,299.90				57,299.90
	Total.....	142,260.31				142,260.31
Naval Academy, Annapolis, Md.	Lebor.....	445,950.75				445,950.75
	Material.....	199,052.87				199,052.87
	Public vouchers.....	29,405.75				29,405.75
	Pay and allowances.....	995,572.75				995,572.75
	Total.....	1,669,980.12				1,669,980.12
Naval Observatory, Washington, D. C.	Material.....	2,423.84				2,423.84
	Public vouchers.....	17,541.85				17,541.85
	Total.....	17,767.39				17,767.39
Navy pay office, Baltimore, Md.	Material.....	16.03				16.03
	Public vouchers.....	3,980.75				3,980.75
	Pay and allowances.....	5,323.76				5,323.76
	Total.....	9,320.54				9,320.54
Radio telegraph stations	Material.....	28,118.98				28,118.98
	Public vouchers.....	87,173.48				87,173.48
	Total.....	115,292.36				115,292.36
Arlington, Va.	Public vouchers.....	16,632.30				16,632.30
Ships and naval establishment in general	Public vouchers.....	740,080.00				740,080.00
Reception	Lebor.....	591,833.46				591,833.46
	Indirect.....	76,973.14				76,973.14
	Material.....	1,034,316.86				1,034,316.86
	Public vouchers.....	3,019,062.47				3,019,062.47
	Pay and allowances.....	896,653.54				896,653.54
Grand total		4,727,174.56				4,727,174.56
		1,147,292.00				1,147,292.00
		2,044,279.10				2,044,279.10
		10,000,960.36				10,000,960.36
		3,538,876.17				3,538,876.17
		2,069,389.97				2,069,389.97
		3,925,947.00				3,925,947.00
		190,151.53				190,151.53
		1,609,658.28				1,609,658.28
		47,901.40				47,901.40
		1,182,732.33				1,182,732.33
		3,112,461.33				3,112,461.33
		896,653.54				896,653.54
		21,478,571.79				21,478,571.79

STATEMENT B—Continued.

TABLE 7.—Expenditures made for the maintenance of shops at industrial navy yards, and also the value of productive labor. Arranged by shops.

[See table 8 for arrangement by accounts.]

Shops.	Total direct shop expense.	Power transfer.	General expense transfer.	Total shop expense.	Productive labor.
Acetylene gas plant:					
Philadelphia, Pa.	\$614.65		\$179.32	\$793.97	\$1,376.81
Mare Island, Cal.	11,669.13	\$40.81	439.76	12,179.70	3,057.27
Boat shop:					
Portsmouth, N. H.	4,273.26	2,526.55	1,973.58	8,773.39	19,543.08
Boston, Mass.	5,849.05	2,722.14	1,728.54	10,299.73	13,272.84
New York, N. Y.	12,762.77	5,063.57	2,919.10	20,745.44	32,290.55
Philadelphia, Pa.	6,857.38	2,053.30	1,923.09	10,833.77	14,708.60
Norfolk, Va.	9,587.05	1,685.17	4,988.73	16,150.95	30,870.13
Mare Island, Cal.	7,499.43	1,085.16	2,709.93	11,394.52	19,022.95
Puget Sound, Wash.	4,473.12	901.42	2,415.95	7,790.49	15,572.90
Olongapo, P. I.	2,183.83	1,694.61	1,198.40	5,016.84	23,267.43
Boiler shop:					
Portsmouth, N. H.	4,516.58	2,716.98	2,546.41	9,779.97	25,103.39
Boston, Mass.	13,568.36	2,526.27	5,972.94	22,067.57	46,631.70
New York, N. Y.	14,464.21	9,237.99	7,345.96	31,048.16	80,613.20
Philadelphia, Pa.	11,907.60	1,760.52	7,548.00	21,116.12	57,763.97
Norfolk, Va.	16,112.56	10,536.70	6,929.27	33,578.53	42,886.00
Mare Island, Cal.	14,134.81	1,499.12	6,870.50	22,504.44	47,781.73
Puget Sound, Wash.	12,465.83	1,621.06	8,330.08	22,417.57	51,442.33
Olongapo, P. I.	7,278.05	1,024.40	856.39	9,158.84	15,996.41
Breech-mechanism shop:					
Washington, D. C.	32,476.03	4,356.98	9,677.43	46,510.49	165,521.38
Buffing shop:					
Washington, D. C.	3,031.79	1,646.17	1,067.85	5,735.81	18,028.87
Cartridge-case shop:					
Washington, D. C.	19,534.96	17,506.11	2,359.23	39,399.35	39,941.59
Chain shop:					
Boston, Mass.	14,913.31	1,871.67	3,610.54	20,395.52	27,882.13
Copper shop:					
Portsmouth, N. H.	2,349.91	785.61	662.95	3,798.47	6,803.30
Boston, Mass.	6,276.23	913.28	2,382.32	9,571.83	18,513.73
New York, N. Y.	10,187.81	1,586.81	3,648.43	15,423.05	40,063.30
Philadelphia, Pa.	11,242.56	2,459.77	11,103.69	24,806.02	85,325.38
Washington, D. C.	8,206.45	1,368.49	2,825.89	12,400.83	47,770.36
Norfolk, Va.	6,011.91	2,970.02	2,509.02	11,490.95	15,822.95
Mare Island, Cal.	3,589.33	436.53	3,115.03	7,140.89	21,858.98
Puget Sound, Wash.	2,537.72	354.78	1,379.74	4,272.24	8,806.07
Olongapo, P. I.	3,576.39	394.25	670.62	4,641.26	12,256.55
Crane shop:					
Norfolk, Va.	2,315.15	40.67	762.93	3,118.75	4,644.72
Dry dock:					
Olongapo, P. I.	21,292.41	115.64	1,923.12	23,331.17	32,019.74
Electrical shop:					
Portsmouth, N. H.	8,086.90	1,249.97	3,760.52	13,097.39	37,724.51
Boston, Mass.	16,466.51	1,720.37	6,849.69	25,036.57	53,041.43
New York, N. Y.	32,177.97	4,905.32	18,666.61	55,749.90	206,037.13
Philadelphia, Pa.	19,797.96	1,695.35	11,217.09	32,710.40	85,842.96
Norfolk, Va.	11,291.97	1,447.14	7,053.90	19,793.01	43,269.17
Charleston, S. C.	2,719.51	7.38	1,573.05	4,299.94	12,268.60
Mare Island, Cal.	18,319.65	1,347.98	8,898.02	28,565.65	61,250.61
Puget Sound, Wash.	8,062.68	293.80	3,910.79	12,257.27	24,612.08
Olongapo, P. I.	2,382.98	942.04	338.10	3,663.12	6,054.56
Electrical, E-1:					
Philadelphia, Pa.			419.09	419.09	3,193.92
Erecting shop:					
Washington, D. C.	35,867.62	9,504.84	11,672.54	57,045.00	196,422.10
Flag shop:					
New York, N. Y.	8,074.54	476.12	1,665.21	10,215.87	18,335.48
Mare Island, Cal.	1,385.05	169.36	678.84	2,233.25	4,650.84
Gun-carriage shop (east):					
Washington, D. C.	38,111.21	9,750.61	11,467.91	59,339.73	195,024.94
Gun-carriage shop (west):					
Washington, D. C.	48,411.72	7,754.86	11,555.86	67,722.44	196,692.27
Gunnery workshop:					
Washington, D. C.	3,103.69	453.04	1,436.24	4,992.97	24,250.69
Gun shop:					
Washington, D. C.	57,285.40	27,801.90	8,508.79	93,596.09	143,695.02
Hauling:					
Washington, D. C.	5,534.48	701.68	3,117.38	9,353.54	52,721.44
House carpenter:					
Norfolk, Va.	2,749.78	8.51	3,060.83	5,818.62	18,786.64

STATEMENT B—Continued.

TABLE 7.—Expenditures made for the maintenance of shops at industrial navy yards, and also the value of productive labor. Arranged by shops—Continued.

Shops.	Total direct shop expense.	Power transfer.	General expense transfer.	Total shop expense.	Productive labor.
Joiner shop:					
Portsmouth, N. H.....	\$7,405.44	\$2,943.41	\$3,136.58	\$13,485.43	\$31,207.20
Boston, Mass.....	10,917.51	3,194.06	4,251.82	18,363.41	33,288.88
New York, N. Y.....	13,944.84	7,920.80	5,825.56	27,691.20	64,396.35
Philadelphia, Pa.....	11,642.38	2,124.54	6,759.24	20,526.16	52,006.40
Norfolk, Va.....	17,387.64	5,559.97	6,738.85	29,686.46	41,267.96
Charleston, S. C.....	10,357.91	3,905.81	7,227.96	21,491.68	55,398.45
Mare Island, Cal.....	8,524.25	1,655.85	6,968.29	17,458.39	47,672.11
Puget Sound, Wash.....	9,325.58	2,544.00	5,099.64	16,969.22	32,363.52
Olongapo, P. I.....	6,088.97	2,371.22	961.47	9,371.66	16,338.33
Laborer:					
Portsmouth, N. H.....	3,604.62	177.59	2,369.88	6,152.09	23,820.50
Boston, Mass.....	7,873.31	718.72	3,058.84	11,650.87	23,715.03
New York, N. Y.....	21,418.15	464.93	13,713.93	35,627.01	151,846.52
Charleston, S. C.....	5,108.56	1,468.23	2,655.92	9,252.71	20,541.43
Puget Sound, Wash.....	13,202.85	811.03	15,197.53	29,211.41	96,929.79
Laborer, No. 1:					
Mare Island, Cal.....	10,467.86	827.60	11,068.73	22,904.19	80,111.13
Laborer, No. 2:					
Mare Island, Cal.....	1,712.12	114.28	2,281.12	4,107.52	15,688.72
Laborer (ship):					
Philadelphia, Pa.....	7,773.62	604.83	5,257.78	13,636.23	40,243.87
Laborer (yard):					
Philadelphia, Pa.....	7,296.09	704.17	10,898.80	18,969.06	83,675.54
Laborers and riggers:					
Norfolk, Va.....	18,576.03	3,133.26	9,513.47	31,222.76	58,221.13
Machine shop:					
Portsmouth, N. H.....	23,111.72	2,989.02	8,774.24	34,874.98	88,331.68
Boston, Mass.....	75,241.66	11,035.07	30,798.40	117,075.13	237,987.70
Charleston, S. C.....	36,409.85	4,963.91	20,586.48	61,979.74	160,351.57
Puget Sound, Wash.....	54,743.88	5,959.27	20,229.66	80,932.81	127,135.39
Cavite, P. I.....	2,048.70	2,829.17	1,427.14	6,305.01	26,699.74
Olongapo, P. I.....	10,253.03	3,995.54	1,906.82	16,155.39	35,115.52
Machine shop (inside):					
New York, N. Y.....	93,809.73	33,425.21	31,045.82	158,280.76	343,034.90
Philadelphia, Pa.....	43,383.49	7,774.90	18,405.44	69,563.83	140,555.21
Norfolk, Va.....	80,784.32	10,842.39	25,717.01	117,343.72	157,510.29
Machine shop (outside):					
New York, N. Y.....	15,818.34	1,220.07	12,777.21	29,815.62	140,573.56
Philadelphia, Pa.....	31,179.10	2,000.44	15,447.07	48,626.61	118,312.33
Norfolk, Va.....	30,267.06	5,044.46	19,916.38	55,227.92	122,235.91
Mare Island, Cal.....	21,386.46	1,679.39	14,481.46	37,547.31	100,289.49
Olongapo, P. I.....	5,264.37	395.92	1,577.00	7,237.29	29,577.96
Machine shop No. 1, Mare Island, Cal.					
Machine shop No. 2, Mare Island, Cal.	36,657.53	1,543.52	14,669.93	52,870.98	100,488.45
Machine shop No. 2, Mare Island, Cal.	32,030.09	1,984.38	13,412.53	47,427.00	92,213.61
Mason:					
New York, N. Y.....	4,425.79	141.55	1,908.18	6,475.52	21,062.80
Miscellaneous:					
Washington, D. C.....	34,817.99	5,093.50	10,799.88	50,711.37	182,698.80
Model basin:					
Washington, D. C.....	23,014.01	1,472.81	3,275.34	27,762.16	55,249.37
Paint shop:					
Portsmouth, N. H.....	2,356.29	85.11	1,244.94	3,686.34	12,163.67
Boston, Mass.....	4,335.30	382.14	2,683.11	7,400.55	21,016.96
New York, N. Y.....	10,143.18	344.40	6,429.30	16,916.88	70,616.90
Philadelphia, Pa.....	14,197.35	377.19	11,663.21	26,237.75	80,078.26
Norfolk, Va.....	9,754.33	393.87	4,818.07	14,966.27	29,614.97
Charleston, S. C.....	1,609.55	.....	967.78	2,577.33	7,364.46
Mare Island, Cal.....	4,738.42	342.40	2,520.57	7,601.39	17,270.23
Puget Sound, Wash.....	8,874.07	301.58	5,433.87	14,609.52	34,150.69
Cavite, P. I.....	143.32	.....	207.60	350.92	4,196.08
Pattern shop:					
Portsmouth, N. H.....	2,624.73	622.04	574.78	3,821.55	5,736.40
Boston, Mass.....	6,183.50	1,735.60	1,842.39	9,771.49	14,095.40
New York, N. Y.....	12,329.47	4,902.85	4,587.35	21,819.67	50,510.06
Philadelphia, Pa.....	3,622.63	1,045.06	1,576.15	6,243.84	12,027.85
Washington, D. C.....	13,639.51	4,215.49	5,938.32	23,793.32	100,394.92
Norfolk, Va.....	7,168.53	1,115.93	2,531.94	10,816.40	15,497.78
Mare Island, Cal.....	8,507.37	861.17	3,362.53	12,731.07	22,935.08
Puget Sound, Wash.....	3,584.73	649.19	768.73	5,110.65	5,571.56
Olongapo, P. I.....	2,262.61	473.39	264.71	2,990.71	4,670.61

STATEMENT B—Continued.

TABLE 7.—Expenditures made for the maintenance of shops at industrial navy yards, and also the value of productive labor. Arranged by shops—Continued.

Shops.	Total direct shop expense.	Power transfer.	General expense transfer.	Total shop expense.	Productive labor.
Pipe shop:					
Mare Island, Cal.....	\$10,190.01	\$587.38	\$7,160.77	\$17,938.16	\$49,213.51
Puget Sound, Wash.....	9,550.76	337.06	4,960.73	14,848.55	30,706.55
Plumber shop:					
Portsmouth, N. H.....	6,438.70	533.88	3,127.66	10,100.24	51,006.28
New York, N. Y.....	24,560.77	4,313.77	13,076.72	41,951.26	144,545.15
Philadelphia, Pa.....	3,516.54	514.34	2,978.45	7,009.33	22,436.22
Norfolk, Va.....	15,637.21	2,188.30	6,328.80	24,154.31	38,968.42
Charleston, S. C.....	3,692.42	333.81	1,710.62	5,736.85	13,341.12
Cavite, P. I.....	969.18	1,130.22	338.07	2,427.42	7,066.83
Power plant:					
Boston, Mass.....	451.67		527.26	978.93	4,010.92
Primer shop:					
Washington, D. C.....	4,033.26	469.79	1,172.66	5,675.71	19,812.66
Printing shop:					
Cavite, P. I.....	95.80	46.43	54.68	196.91	976.68
Olongapo, P. I.....	164.61	26.00	25.23	215.93	420.60
Public works:					
Portsmouth, N. H.....	5,283.99	548.12	3,492.02	9,324.13	34,608.71
Boston, Mass.....	7,222.91	338.41	8,965.83	16,517.15	70,841.18
New York, N. Y.....	4,343.02	188.32	4,998.71	9,530.05	55,192.65
Washington, D. C.....	5,657.10	167.14	3,851.38	9,575.62	66,104.58
Norfolk, Va.....	7,539.30	19.91	7,083.74	14,592.95	43,233.22
Charleston, S. C.....	4,372.83	94.45	5,113.39	9,580.67	39,894.78
Mare Island, Cal.....	6,550.69	284.27	14,044.31	20,879.27	96,433.89
Puget Sound, Wash.....	5,264.98	155.71	10,415.71	15,836.40	66,469.95
Cavite, P. I.....	1,755.56	165.39	452.54	2,373.49	8,446.57
Riggers:					
Portsmouth, N. H.....	69.10	246.69	318.04	633.83	3,178.33
Boston, Mass.....	4,264.46	170.93	5,192.14	9,617.53	40,261.48
New York, N. Y.....	3,534.38	856.41	1,806.62	6,202.41	20,273.12
Puget Sound, Wash.....	1,959.16	237.45	506.15	2,702.76	3,220.06
Olongapo, P. I.....	4,906.93	655.12	1,063.53	6,545.58	19,108.90
Ropewalk:					
Boston, Mass.....	12,838.39	10,855.61	7,484.71	31,178.71	57,742.16
Sail loft:					
Portsmouth, N. H.....	816.53	253.45	836.30	1,906.28	8,464.14
Boston, Mass.....	3,221.03	512.38	5,123.94	8,857.35	11,872.60
New York, N. Y.....	4,037.65	845.34	2,063.26	6,946.25	22,864.87
Philadelphia, Pa.....	2,406.93	1,170.48	1,994.71	5,572.12	16,193.25
Norfolk, Va.....	4,406.85	722.00	2,133.00	7,263.85	12,931.86
Mare Island, Cal.....	2,464.68	161.90	1,313.11	3,939.69	8,961.37
Puget Sound, Wash.....	2,587.97	354.51	906.43	3,848.91	5,743.01
Cavite, P. I.....	1,857.41	260.63	674.60	2,792.64	12,998.78
Sawmill:					
Mare Island, Cal.....	1,490.33	579.40	619.76	2,689.49	4,246.62
Cavite, P. I.....	106.96	732.38	3.96	843.28	85.86
Seamen gunners' shop:					
Washington, D. C.....	5,117.05	420.32	1,434.04	6,971.41	24,190.18
Secondary-mount shop:					
Washington, D. C.....	33,846.51	4,256.07	9,370.69	47,473.27	158,464.22
Sheet-metal shop:					
New York, N. Y.....	18,303.39	4,215.54	10,762.19	33,281.12	119,362.61
Philadelphia, Pa.....	3,961.99	1,417.80	1,472.55	6,852.34	11,267.97
Norfolk, Va.....	14,079.47	1,345.85	5,790.28	21,215.60	35,630.57
Mare Island, Cal.....	8,694.46	737.60	4,064.19	13,496.25	28,005.66
Puget Sound, Wash.....	9,486.92	561.24	3,155.90	13,204.06	20,084.55
Olongapo, P. I.....	1,729.17	456.54	206.22	2,391.93	8,855.42
Ship fitter:					
Portsmouth, N. H.....	19,545.20	5,420.06	6,912.01	31,877.27	68,631.68
Boston, Mass.....	39,043.32	11,812.51	12,179.35	63,035.18	96,023.45
New York, N. Y.....	115,303.55	33,167.07	34,844.48	183,315.10	385,357.34
Norfolk, Va.....	53,826.52	12,918.20	18,764.44	85,509.16	116,010.75
Charleston, S. C.....	16,149.76	6,791.53	7,871.82	30,813.11	60,192.63
Mare Island, Cal.....	57,261.51	4,891.22	23,565.49	85,708.22	163,956.51
Puget Sound, Wash.....	20,624.90	2,434.03	9,342.67	32,401.60	59,117.46
Olongapo, P. I.....	10,300.01	2,411.01	1,629.89	14,340.91	29,771.11
Ship fitter (inside):					
Philadelphia, Pa.....	10,122.50	1,299.91	5,501.00	16,923.41	42,472.98
Ship fitter (outside):					
Philadelphia, Pa.....	22,171.41	4,967.49	10,087.31	37,166.21	76,989.67

STATEMENT B—Continued.

TABLE 7.—Expenditures made for the maintenance of shops at industrial navy yards, and also the value of productive labor. Arranged by shops—Continued.

Shops.	Total direct shop expense.	Power transfer.	General expense transfer.	Total shop expense.	Productive labor.
Shipwright:					
Portsmouth, N. H.....	\$2,578.96	\$445.75	\$1,310.76	\$4,335.47	\$13,302.07
Boston, Mass.....	5,204.05	1,567.16	2,312.97	9,084.18	18,364.71
New York, N. Y.....	20,773.74	10,768.62	10,373.48	41,915.84	113,895.46
Philadelphia, Pa.....	6,494.87	721.49	3,799.44	11,015.80	29,219.96
Norfolk, Va.....	12,004.05	978.17	6,913.48	19,895.70	42,354.37
Mare Island, Cal.....	13,069.02	757.39	6,743.09	20,569.50	46,338.84
Puget Sound, Wash.....	9,777.59	1,383.86	8,922.97	20,084.42	56,532.99
Sight shop:					
Washington, D. C.....	26,367.73	1,571.64	4,693.92	32,633.29	80,151.00
Smith:					
Portsmouth, N. H.....	8,599.07	2,354.07	1,051.02	12,004.16	10,442.96
Boston, Mass.....	12,428.66	4,024.59	2,854.94	19,308.19	22,008.06
New York, N. Y.....	21,975.63	9,969.32	4,527.21	36,472.16	49,894.30
Philadelphia, Pa.....	8,451.97	6,797.30	1,625.11	16,874.38	12,400.84
Norfolk, Va.....	22,593.26	10,352.63	6,337.58	39,283.37	38,837.37
Charleston, S. C.....	1,504.76	1,001.45	540.16	3,046.37	4,659.35
Mare Island, Cal.....	17,335.12	4,779.86	5,476.36	27,591.34	37,685.11
Puget Sound, Wash.....	10,024.02	8,297.87	2,728.59	21,048.48	17,233.95
Olongapo, P. I.....	3,830.61	1,515.28	376.39	5,722.28	6,768.96
Spar shop:					
Portsmouth, N. H.....	3,482.10	1,618.84	949.88	6,050.82	9,347.46
Teams:					
Norfolk, Va.....	247.79	3.43	145.74	396.96	787.43
Tool shop:					
Washington, D. C.....	26,761.60	4,510.79	7,870.23	39,142.62	133,182.02
Transportation:					
Portsmouth, N. H.....	1,813.33	.....	734.28	2,547.61	7,331.62
Wharf builder:					
New York, N. Y.....	3,836.49	158.14	2,075.71	6,070.34	22,851.63
Yard construction:					
Olongapo, P. I.....	11,439.41	73.43	2,161.83	13,674.67	41,057.53
Yardmaster:					
New York, N. Y.....	10,227.72	171.62	3,941.16	14,340.50	43,516.34

RECAPITULATION BY NAVY YARDS.

Portsmouth, N. H.....	\$106,956.43	\$25,517.14	\$43,805.85	\$176,279.42	\$436,746.00
Boston, Mass.....	246,299.23	56,130.93	104,219.73	406,649.89	810,571.16
New York, N. Y.....	476,455.14	134,398.77	199,005.20	809,847.11	2,197,133.53
Philadelphia, Pa.....	226,531.02	39,538.88	129,806.54	395,876.44	994,079.71
Washington, D. C.....	424,718.11	103,021.23	112,085.68	639,825.02	1,900,325.41
Norfolk, Va.....	342,342.79	71,216.48	147,966.96	561,526.23	908,351.65
Charleston, S. C.....	81,924.65	18,606.57	48,247.18	148,778.40	373,952.21
Mare Island, Cal.....	298,057.32	26,376.58	155,064.32	479,498.22	1,088,642.54
Puget Sound, Wash.....	188,536.76	27,198.46	108,811.14	317,546.36	655,141.84
Cavite, P. I.....	9,130.70	6,798.83	4,356.96	20,286.51	33,757.91
Olongapo, P. I.....	90,419.55	14,849.87	13,973.32	119,242.74	253,021.20
Grand total.....	2,489,371.70	523,641.74	1,062,342.90	4,075,356.34	9,681,728.16

STATEMENT B—Continued.

TABLE 8.—Expenditures made for the maintenance of shops at industrial navy yards, and also the value of productive labor, arranged by accounts.

[See Table 7 for arrangement by shops.]

Accounts.	Portsmouth, N. H.	Boston, Mass.	New York, N. Y.	Philadel- phia, Pa.	Washing- ton, D. C.	Norfolk, Va.	Charles- ton, S. C.	Marine Is- land, Cal.	Puget Sound, Wash.	Carleton, P. I.	Olon- gopo, P. I.	Total.
Supervision.....	\$51,578.53	\$98,601.19	\$304,100.07	\$107,073.79	\$180,343.08	\$106,850.47	\$834,649.06	\$107,037.07	\$98,009.00	\$5,326.50	\$32,406.70	\$1,076,638.44
Maintenance of shop furniture, fixtures, and equipment.....	337.35	7,283.00	8,428.76	2,083.00	6,617.96	9,359.28	745.60	7,591.06	3,762.68	269.46	1,863.48	46,881.28
Maintenance, loose and hand tools.....	17,000.09	42,111.19	95,770.92	41,725.23	71,600.16	66,510.09	12,351.81	56,941.69	34,878.54	1,322.64	12,781.21	435,893.88
Maintenance of machine tools.....	8,069.00	13,404.52	46,564.54	16,489.72	28,312.57	26,440.42	7,668.13	21,793.46	7,168.36	829.18	4,089.10	180,892.90
Maintenance of buildings.....	444.57	3,537.98	11,893.04	3,695.41	8,625.10	4,322.44	715.60	3,361.86	1,076.78	71.28	263.98	38,026.90
Elevators.....		799.81	2,233.21	167.59	48.33	8.59	136.77	133.84	86.01			3,622.18
Miscellaneous shop expense.....	24,580.67	66,236.96	86,833.12	49,889.96	136,863.79	52,240.00	22,076.10	88,989.39	36,910.51	887.91	9,076.23	573,536.74
Power.....			676.43		10,977.57	65.33		763.57				12,558.82
Fuel.....	4,665.22	14,288.35	19,898.38	4,492.67	12,106.49	14,610.84	2,288.17	7,764.37	3,560.26	398.43	10,203.72	94,236.43
Correction of errors.....	261.01	46.28	29.67	583.06	330.06	1,941.79	1,183.55	172.01	2,014.23		136.15	7,071.76
Shop store losses.....						8.86	38.87		20.34			53.25
Total direct shop expense.....	106,956.43	246,299.23	476,455.14	226,531.02	424,718.11	342,842.79	81,924.65	268,057.32	186,536.76	9,130.70	90,419.55	2,489,871.70
Power transfer.....	25,517.14	56,130.98	134,396.77	39,538.88	103,021.23	71,216.48	18,696.87	26,376.58	27,198.46	6,798.88	14,849.87	532,641.74
General expense transfer.....	43,805.86	104,219.78	199,005.20	129,806.54	112,085.68	147,966.96	48,247.18	155,064.32	108,811.14	4,806.96	13,973.32	1,062,842.90
Total shop expense.....	176,279.42	406,649.99	809,847.11	395,876.44	639,825.02	561,526.23	148,778.40	479,468.22	317,546.36	20,736.51	119,242.74	4,078,356.34
Productive labor.....	436,746.00	810,571.16	2,197,133.53	994,079.71	1,900,326.41	908,351.65	373,952.21	1,068,642.54	656,141.94	83,767.91	283,021.20	9,681,722.16

TABLE 9.—Statement of general expense at industrial navy yards.

Accounts.	Portsmouth, N. H.	Boston, Mass.	New York, N. Y.	Philadelphia, Pa.	Washington, D. C.	Norfolk, Va.	Charleston, S. C.	Mare Island, Cal.	Puget Sound, Wash.	Cavite, P. I.	Olongapo, P. I.	Total.
Maintenance of miscellaneous buildings.....	\$311.67	\$1,797.55	\$6,804.37	\$3,442.81	\$1,836.91	\$2,748.22	\$962.91	\$6,645.16	\$349.53	\$80.20	\$570.45	\$25,732.83
Maintenance of elevators.....	454.92	96.11	710.41	219.74			5.80	5.00	5.11			1,497.09
Maintenance of furniture, fixtures and equipment for offices.....	3.70	530.65	3,206.22	1,408.97	1,436.49	2,512.96	245.04	828.08	536.97	87.44	554.09	11,411.31
Maintenance of telephone systems.....	1,810.63	1,533.43	2,202.39	2,982.47	744.38	3,143.96	2,051.96	2,494.25	717.82	347.80	868.42	13,887.41
Maintenance of water system.....	1,069.06	3,761.87	13,827.83	1,811.67	41.16	1,112.55	1,908.17	2,641.06	4,448.70	84.34	965.49	33,273.91
Maintenance of sewer system.....	7.76	1,192.33	3,839.73	1,218.56	513.98	1,112.55	1,128.13	1,128.89	1,108.68		15.46	2,264.07
Janitor service.....	3,605.17	8,771.72	22,727.14	9,119.04	18,039.64	14,362.28	1,823.97	7,448.43	5,342.26	373.26	1,063.74	92,547.64
Maintenance of tracks.....	1,331.62	1,836.67	2,863.86	2,418.11	7,201.45	2,048.28	3,173.88	5,130.01	1,368.68	13.51	26.13	27,530.20
Maintenance of railroad rolling stock.....	2,275.63	9,906.65	17,762.72	21,108.83	12,065.45	6,686.02	7,071.96	20,557.57	13,557.48	37.27	165.49	111,225.07
Maintenance of weighing apparatus.....	28.22	16.30	136.70		1.96	26.22		177.71	240.39			627.70
Maintenance of miscellaneous yard appliances.....	1,580.57	120.37	2,475.61	2,406.44		887.96	2,338.07	5,304.70	3,238.64	6.34	165.15	13,532.85
Maintenance of floating property.....	5,870.92	10,107.17	17,193.58	3,798.55	103.31	15,638.97	425.99	5,344.63	11,630.57	63.30	2,543.92	72,716.91
Maintenance of live stock, equipment, and supplies.....	2,587.11	6,627.95	8,741.40	4,618.99		192.58	2,271.65	5,800.21	2,799.44	181.16	393.45	34,281.94
Maintenance of vehicles.....	404.15	1,272.28	5,490.27	2,554.98	3,281.95	457.81	4,581.35	4,801.61	2,877.53		554.17	19,911.50
General office expense.....	3,212.36	4,415.80	11,154.05	2,080.94	9,680.94	5,692.54	3,387.64	4,264.46	4,610.43	1,651.71	2,345.08	57,083.99
Drafting expense.....	1,612.02	3,084.40	13,399.74	5,105.40	1,542.51	5,376.58	2,047.44	4,264.46	4,610.43	149.74	888.45	41,084.26
Inspection department.....		3,428.74	10,609.28	3,176.31	2,281.88	2,302.05		2,154.52	932.65			21,952.81
Transport and hauling.....	9.04	3,154.26	4,538.46	884.01	9,089.64	9,203.08	60.76	2,403.23	562.65	33.71	11.76	30,292.57
Heating, boiler, testing, etc.....	12.00	224.62	26.40	48.93	421.83	1,214.34		8.08	53.68		12.95	2,022.83
Maintenance of factory equipment.....			9,353.33		4,403.56	887.71	288.91	790.30	41.65			15,795.46
Examination of employees.....	244.71	125.68	467.80	255.36	3,663.25	241.34	293.53	431.73	401.29			6,174.60
Handling material not chargeable to shops.....												
Time-clock system.....	516.53	4,988.60	12,849.10	19,779.18	4,083.97	20,158.07	1,808.65	7,722.37	6,859.14		126.56	78,892.17
General superintendence.....	1,032.24	5,966.75	13,018.39	13,865.94	3,664.44	355.16	7.36	16.63	13.48			3,664.12
Planning and estimating.....	14,668.81	31,454.36	4,966.08	28,582.81	5,339.29	54,116.07	12,200.64	30,698.40	6,202.98		3,079.53	137,005.32
Lighting ships out of commission.....					27,947.77			33,677.33	35,508.23			189,007.03
Transfer from power expense.....	2,524.63	2,536.44	18,662.75	2,490.03	12,326.31	1,535.26	1,979.44	3,327.21	3,014.50	1,306.79		1,979.44
												49,182.34
Total general expense.....	45,753.96	106,949.78	204,999.77	136,453.93	123,874.07	153,830.60	49,452.04	190,404.18	107,526.03	4,416.57	14,657.53	1,106,318.36

STATEMENT B—Continued.

TABLE 9.—Statement of general expense at industrial navy yards—Continued.

Accounts.	Portsmouth, N. H.	Boston, Mass.	New York, N. Y.	Philadel- phia, Pa.	Washing- ton, D. C.	Norfolk, Va.	Charleston, S. C.	Mare Island, Cal.	Puget Sound, Wash.	Cavite, P. I.	Olongapo, P. I.	Total.
<i>Distribution of general ex- pense.</i>												
Transferred to shop expense...	\$43,805.85	\$104,219.73	\$199,005.20	\$129,806.54	\$112,085.68	\$147,966.96	\$48,247.18	\$155,084.32	\$103,811.14	\$4,356.98	\$13,973.32	\$1,062,342.00
Transferred to foundry.....	1,066.81	2,730.00	5,387.71	5,567.12	3,134.81	4,768.42	1,204.86	5,023.43	1,866.31	.....	594.18	30,878.70
Transferred to galvanizing plant.....	59.41	.....	209.60	176.55	.....	423.97	.....	146.48	228.65	.....	.....	1,242.66
Transferred to paint shop.....	.....	.....	192.01	92.09	.....	670.25	.....	166.95	180.50	59.59	.....	1,364.89
Transferred to tool-dressing shop.....	222.79	.....	.....	811.63	.....	.....	.....	.....	.....	.....	.....	1,034.42
Transferred to storekeeping expense.....	.....	.....	.....	.....	.....	.....	.....	.....	1,441.43	.....	.....	1,441.43
Transferred to oxyhydrogen acetylene plant.....	.....	.....	205.25	.....	.....	.....	.....	.....	.....	.....	.....	205.25
Transferred to forge shop.....	.....	.....	.....	.....	3,653.58	.....	.....	.....	.....	.....	.....	3,653.58
Transferred to general ac- count of advances.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	160.03	160.03

TABLE 10.—Statement of power expense at industrial navy yards.

Accounts.	Portsmouth, N. H.	Boston, Mass.	New York, N. Y.	Philadelphia, Pa.	Washington, D. C.	Norfolk, Va.	Charleston, S. C.	Marine Island, Cal.	Puget Sound, Wash.	Oayite, P. I.	Olongapo, P. I.	Total.
Maintenance of power-plant buildings.....	\$233.38	\$1,063.91	\$1,243.27	\$694.42	\$1,654.99	\$699.92	\$617.57	\$122.12	\$944.11	\$75.51	\$147.51	\$6,776.71
Maintenance of substation buildings.....	.....	65.88	283.37	1.67	.....	50.55	.....	1.32	29.31	.....	.....	407.07
Maintenance of power-plant boilers, flues, and stacks.....	463.20	8,747.60	14,750.37	9,968.38	6,166.63	3,368.33	2,496.32	591.10	5,033.75	382.08	1,193.42	53,164.18
Maintenance of power-plant piping.....	886.20	2,349.76	2,569.58	1,477.17	3,363.92	1,442.43	490.40	403.17	645.90	265.93	582.37	14,476.73
Maintenance of power-plant machinery.....	586.50	4,042.50	4,587.39	2,812.73	5,388.29	3,535.93	998.22	940.06	2,840.36	778.60	1,151.41	27,661.99
Maintenance of distributing system (heat).....	401.02	877.26	12,890.15	585.25	3,109.00	603.04	349.44	393.08	882.85	.....	.....	20,061.09
Maintenance of distributing system (electric).....	7,347.41	7,194.04	13,187.87	11,714.01	6,420.99	13,848.11	714.78	8,019.86	5,040.63	494.75	1,407.44	75,389.89
Maintenance of distributing system (pneumatic).....	422.43	1,458.18	2,708.52	3,036.10	426.14	3,196.82	562.90	2,146.88	2,818.10	.....	148.54	17,524.61
Water.....	4,139.29	2,053.31	9,496.78	2,923.98	.....	3,694.80	237.77	2,355.35	1,044.49	300.09	.....	26,178.86
Maintenance of substation motors and accessories.....	.....	171.57	2,104.78	95.37	.....	.....	672.48	115.26	50.00	.....	.....	3,202.46
Maintenance of furniture, fixtures, and equipment.....	.....	117.55	527.33	32.81	312.89	55.38	500.09	58.68	42.68	13.85	67.88	1,729.14
Attendance on light and power plants.....	17,455.94	25,527.68	33,557.02	26,249.89	36,304.49	27,876.62	14,179.36	12,253.72	13,610.09	5,169.37	10,134.38	222,317.56
Fuel.....	36,752.82	46,902.26	114,972.76	76,057.67	78,342.45	53,558.98	23,896.43	28,674.00	61,942.83	27,232.95	36,800.60	585,126.75
Miscellaneous power-plant expense.....	162.70	995.30	3,388.53	1,121.15	3,990.68	1,101.51	876.05	1,331.22	2,144.51	2,345.10	327.61	17,767.36
Oil, grease, and waste.....	1,008.96	621.62	1,099.38	1,933.24	2,381.26	733.66	701.17	852.49	987.80	645.81	692.41	11,467.80
Supervision.....	3,312.44	5,340.15	3,003.69	2,683.94	5,061.84	6,723.22	2,820.88	2,934.33	4,518.91	1,762.11	2,029.31	40,190.82
Maintenance of distributing system (hydraulic).....	.....	16.12	865.88	36.12	.....	.....	.....	526.31	3.16	.....	.....	1,447.89
Maintenance of distributing system (steam).....	.....	317.30	62.74	179.18	4,260.60	336.68	.....	286.95	949.46	.....	265.60	6,653.51
Maintenance of underground conduits and pole lines.....	.....	.....	.....	450.50	.....	1.81	.....	6.80	143.62	49.12	.....	652.05
Maintenance of loose and hand tools.....	92.92	312.18	261.71	139.46	8,283.71	169.53	484.14	11.58	142.69	6.86	251.46	10,156.14
Total power expense.....	73,265.21	108,194.17	221,499.09	142,693.04	165,467.78	120,908.32	50,597.00	62,024.38	103,115.25	89,422.13	55,199.94	1,142,384.31

STATEMENT B—Continued.

TABLE 10.—Statement of power expense at industrial navy yards—Continued.

Accounts.	Portsmouth, N. H.	Boston, Mass.	New York, N. Y.	Philadelphia, Pa.	Washington, D. C.	Norfolk, Va.	Charleston, S. C.	Mare Island, Cal.	Puget Sound, Wash.	Cavite, P. I.	Olongapo, P. I.	Total.
<i>Distribution of power expense.</i>												
Pay, miscellaneous.....	\$4,260.38	\$5,184.49							\$392.75	\$1,404.75		\$11,302.37
Maintenance, Yards and Docks.....	6,062.91	4,008.88	\$6,084.47	\$11,024.19	\$8,391.93	\$9,300.46	\$6,508.32	\$11,089.20	7,094.98	3,426.60	\$1,970.79	75,560.73
Ordnance and ordnance stores			1,871.31	460.08	2,953.16				1,227.08	2,163.51	8.67	8,690.78
Construction and repair.....	2,082.88	1,540.99	1,694.71	546.15	222.92	2,520.06		4,235.98	109.48	162.80		13,045.65
Maintenance, Supplies and Accounts.....	1,095.10	6,194.80	26,584.05	6,387.89	1,076.85	3,088.89	268.11	2,233.05	3,358.88	1,382.94	81.25	50,862.89
Naval supply account.....	27,171.10	32,104.41	37,927.43	81,228.54	37,363.13	32,721.00	34,633.85	11,960.73	56,738.63	20,866.45	35,245.51	\$80,218.74
Miscellaneous appropriations.....	4,580.07	495.23	5,327.60	819.28	82.26	264.47		2,501.65	978.54	2,346.76	2,500.48	19,889.37
Total to appropriations.....	45,222.44	49,528.80	69,419.57	100,664.13	50,120.24	47,854.58	31,408.28	32,320.99	72,902.29	31,316.51	39,803.80	589,560.23
Shop expense.....	26,517.14	56,150.93	134,368.77	36,538.88	103,021.23	71,218.48	18,608.57	26,376.58	27,198.46	6,798.83	14,846.57	523,641.74
General expense.....	2,594.63	2,586.44	18,662.75	2,460.03	12,356.31	1,865.26	882.16	3,327.21	5,014.60	1,808.79		49,182.34
Total power expense.....	73,265.21	108,194.17	221,409.09	142,663.04	165,467.78	120,908.32	50,597.00	62,024.38	103,115.25	39,422.13	55,199.94	1,142,384.31

STATEMENT C.

TABLE 1.—Statement showing the value of stores under Title X (except provisions and clothing and small stores) carried on the books of general storekeepers ashore and afloat, custodians of coaling plants, and masters of naval colliers on July 1, 1913, the receipts from purchase and other sources, the expenditures during the year, and the balances on hand June 30, 1914.

	On hand July 1, 1913, with receipts and expenditures during fiscal year 1914.	Balances on hand June 30, 1914.
Balances on hand:		
Navy yard, Portsmouth.....	\$1,029,648.87	\$1,031,651.80
Navy yard, Boston.....	2,900,286.32	2,779,010.58
Naval magazine, Hingham.....	2,484,622.46	2,432,579.86
Naval torpedo station, Rhode Island.....	1,839,485.41	1,433,153.26
Naval training station, Newport.....	2,772.00	15,983.65
Navy yard, New York.....	4,665,637.21	4,364,540.79
Naval magazine, Iona Island.....	8,192,035.14	7,672,492.67
Naval magazine, Dover.....	3,451,182.46	3,596,749.52
Navy yard, Philadelphia.....	2,734,580.01	4,055,992.54
Naval magazine, Fort Mifflin.....	4,722,806.62	4,882,805.18
Naval Academy, Annapolis.....	75,071.17	74,366.24
Navy yard, Washington.....	13,114,791.57	11,390,671.07
Naval Observatory, Washington.....	98,120.08	118,564.07
Naval proving ground, Indian Head.....	1,688,529.51	2,372,880.43
Navy yard, Norfolk.....	3,084,785.15	3,326,064.00
Naval magazine, St. Julien's Creek.....	6,777,887.35	7,866,486.32
Navy yard, Charleston.....	387,123.99	676,854.40
Naval Disciplinary Barracks, Port Royal.....	46,099.93	51,180.48
Naval Station, Key West.....	72,817.80	84,585.44
Naval station, Pensacola.....		1,890.01
Naval station, New Orleans.....	977.71	815.14
Naval training station, Great Lakes.....	19,026.58	19,105.78
Naval training station, San Francisco.....	1,784.64	1,018.41
Navy yard, Mare Island.....	3,964,343.57	3,690,704.46
Naval magazine, Mare Island.....	4,714,932.83	5,046,643.82
Navy yard, Puget Sound.....	3,588,985.33	3,868,280.99
Naval station, Guantanamo.....	258,135.98	336,330.44
Naval station, Cavite.....	1,969,685.71	1,793,585.28
Naval station, Olongapo.....	2,201,840.64	2,167,910.19
Naval station, Guam.....	119,198.50	88,599.35
Naval station, Pearl Harbor.....	524,156.05	841,240.38
Naval station, Tutuila.....	58,900.72	35,135.89
Naval coal depot, Melville.....	175,917.50	178,243.98
Naval coaling station, New London.....	10,972.95	10,499.97
Naval coaling station, San Diego.....	34,946.78	47,885.30
Naval coaling station, Pichilingue.....	19,724.79	13,126.33
Naval coaling station, Sitka.....	61,410.19	43,940.34
Naval coaling station, Yokohama.....	41,921.42	22,860.04
Naval colliers.....	129,509.87	205,784.54
G. S. K. vessels.....	2,138,003.68	2,625,903.68
Shipments between stations in transit.....	1,743,661.35	1,616,414.79
Naval stores temporarily in custody of War Department and others.....	128,468.88	212,221.70
Total on hand July 1, 1913.....	79,274,688.72	
Received during the fiscal year 1914:		
From open purchase.....	\$3,070,405.61	
From contracts.....	22,649,749.59	
From other Government departments and Marine Corps.....	660,061.20	
From manufacture, Title Z.....	12,657,662.45	
From ships, Titles B and Y.....	14,778,498.38	
From provisions and clothing accounts.....	75,383.44	
Material furnished with new vessels by contractors.....	600,590.21	
From plant account.....	271,854.52	
Unused material returned for credit.....	73,737.22	
From gain by inventory.....	483,386.39	
Total.....	55,321,319.01	
Expended during the fiscal year 1914:		
For use.....	18,942,769.16	
Sales to other Government departments, etc.....	598,321.97	
To ships, Titles B and Y.....	30,260,756.98	
Fuel issued to naval officers.....	16,505.89	
To provisions and clothing accounts.....	73,008.81	
Condemned to be sold, Title W.....	647,743.27	
Condemned, loss by appraisal, Title W.....	2,961,988.54	
Total.....	53,501,094.62	
Total.....	81,094,913.11	81,094,913.11

STATEMENT C—Continued.

TABLE 2.—Statement of the value of stores under Titles B and Y received and expended by the several departments of ships in commission, excepting medical and pay officers' stores, for the fiscal year ending June 30, 1914.

Bureau.	Balance on hand July 1, 1913.	Receipts.	Total on hand and received.	Expended for use and condemned.
Equipment.....	\$10,943,513.72	\$2,464,401.41	\$13,407,915.13	\$1,610,336.00
Ordnance.....	65,976,137.06	21,169,888.94	87,146,026.00	1,887,000.03
Construction and Repair.....	6,153,791.66	1,806,662.55	7,960,454.21	1,081,235.75
Steam Engineering.....	4,458,082.55	6,426,354.23	10,884,436.88	5,890,844.59
Supplies and Accounts.....	77,925.36	30,924.75	117,850.11	24,513.03
Total.....	87,609,450.35	31,907,241.98	119,516,692.33	10,434,242.09

Bureau.	Expended by transfer.	Total expenditures.	Balance on hand June 30, 1914.
Equipment.....	\$3,772,155.06	\$5,382,494.75	\$8,025,420.38
Ordnance.....	17,241,894.82	19,128,903.85	68,017,122.15
Construction and Repair.....	1,597,432.33	2,628,668.08	5,331,786.13
Steam Engineering.....	1,139,991.10	7,020,835.69	3,863,601.19
Supplies and Accounts.....	9,863.60	34,676.63	83,183.43
Total.....	23,761,336.91	34,195,579.00	85,321,113.23

Balance on hand July 1, 1913.....	\$87,609,450.35	
Received during fiscal year 1914.....	31,907,241.98	
		\$119,516,692.33
Expended, cost of commission (use and condemned).....	10,434,242.09	
Expended by transfer to yards, ships, etc.....	23,761,336.91	
		34,195,579.00
Balance on hand June 30, 1914.....		85,321,113.23
Value of stores in transit from yards and stations to ships.....		3,473,175.29
Value of stores on board ships and in transit under Titles B and Y on June 30, 1914....		88,799,288.53

TABLE 3.—Statement of receipts and expenditures of provisions, fiscal year 1914.

RECEIPTS.			
Balances July 1, 1913:			
On hand at navy yards and stations.....		\$750,256.89	
On board ships.....		764,592.76	
In transit.....		177,667.92	
			\$1,692,507.57
Receipts at navy yards and stations:			
From pay officers.....		1,781,834.70	
Purchases.....		4,061,017.01	
From United States Marine Corps.....		3,410.67	
From other departments at yards.....		35,429.89	
From ship's stores.....		1,487.11	
From naval auxiliaries.....		86.01	
Gain by inventory.....		559.00	
Gain from advanced prices.....		8,949.41	
			5,862,773.80
Received on board ships:			
From pay officers.....		5,680,535.58	
Purchases.....		3,391,533.81	
From other departments of ships.....		7,485.73	
From United States Marine Corps.....		3,824.88	
From ship's stores.....		2,680.93	
From naval auxiliaries.....		763.57	
			9,086,814.50
Total.....			16,672,096.87

EXPENDITURES.			
Expenditures at navy yards and stations:			
To pay officers.....		5,233,045.62	
To other departments of yards.....		82,880.24	
To naval auxiliaries.....		33,161.62	
To ship's stores.....		73,650.24	
Subsistence of lepers, Island of Guam.....		3,229.37	
Sales for cash.....		283,384.57	
To United States Marine Corps.....		66,402.28	
To Revenue-Cutter Service.....		101.59	
Condemned by survey to loss.....		16,530.74	
Condemned to be sold at auction.....		11,004.98	
Lost in transit.....		788.30	
For use (expense account).....		5,351.98	
			5,819,531.47

STATEMENT C—Continued.

TABLE 3.—Statement of receipts and expenditures of provisions, fiscal year 1914—Contd.

EXPENDITURES—continued.	
Expenditures on board ships:	
To pay officers.....	\$2,229,324.66
Issues to crew and marines.....	5,669,714.44
Extra issues to engineer and dynamo forces.....	84,026.47
Sales for cash.....	511,677.30
Other departments of ships.....	26,151.92
To ship's stores.....	13,012.69
To naval auxiliaries.....	16,198.16
To United States Marine Corps.....	102,601.28
To Naval Militia.....	4,264.54
To destitute Americans.....	9,899.98
Deficit in accounts.....	554.42
To United States Army.....	116,640.37
Condemned by survey to loss.....	74,882.02
Loss on issues.....	10,019.44
Loss from reduced prices.....	29,858.16
Balances June 30, 1914:	
On hand at navy yards and stations.....	595,247.74
On board ships.....	948,167.50
In transit.....	408,783.21
	<u>1,952,198.45</u>
Total.....	16,672,095.87

TABLE 4.—Provisions—Ship's store account.

RECEIPTS.	
Balances July 1, 1913:	
On hand.....	\$169,679.34
In transit.....	4,474.73
	<u>\$174,154.07</u>
From pay officers.....	121,527.47
Purchases.....	825,447.81
From provisions.....	63,904.48
From clothing and small stores.....	104,748.73
From other departments of ships.....	5,777.14
From United States Marine Corps.....	106.10
Gain from advanced prices (profits).....	114,191.45
	<u>1,235,708.18</u>
Total.....	1,409,857.25
EXPENDITURES.	
To pay officers.....	121,527.47
Sales.....	1,062,863.15
To provisions.....	4,168.04
To clothing and small stores.....	241.48
To other departments of ships.....	345.57
To destitute Americans.....	17.78
Crew's entertainment allotment.....	5,440.98
Condemned by survey to loss.....	6,436.98
Deficit in accounts.....	1,997.24
	<u>1,208,088.39</u>
Balances June 30, 1914:	
On hand.....	202,718.75
In transit.....	4,100.11
	<u>206,818.86</u>
Total.....	1,409,857.25

TABLE 5.—Statement of receipts and expenditures of provisions, naval auxiliary vessels.

RECEIPTS.	
Stores on hand June 30, 1913.....	\$12,408.04
Purchases.....	96,723.13
From Marine Hospital Service.....	22.60
From naval supply account.....	135.73
From pay officers of the Navy.....	48,737.39
From masters of naval auxiliaries.....	7,227.01
	<u>164,253.90</u>
Total.....	164,253.90
EXPENDITURES.	
Issues to crew.....	129,851.53
Issues to enlisted men, Navy.....	5,200.80
Issues to enlisted men, Marine Corps.....	2,563.60
To destitute Americans.....	1,778.80
Deficit in accounts.....	20.00
Sales for cash to officers' messes.....	2,892.97
Condemned by survey.....	1,638.62
To masters of naval auxiliaries.....	7,256.01
To pay officers of the Navy.....	179.77
	<u>151,448.10</u>
Stores on hand June 30, 1914.....	12,806.80
Total.....	164,253.90

STATEMENT C—Continued.

TABLE 6.—Statement of receipts and expenditures of clothing and small stores, fiscal year 1914.

		RECEIPTS.	
Balances July 1, 1913:			
On hand at navy yards and stations.....		\$2,094,859.08	
On board ships.....		1,021,619.54	
In transit.....		151,156.20	
		3,267,634.82	
Less difference between cost and issuing price.....		130,696.90	\$3,136,937.92
Receipts at navy yards and stations:			
From pay officers.....		1,816,881.09	
Purchases.....		1,727,141.29	
From Lighthouse Service.....		141.40	
From United States Marine Corps.....		24,013.31	
From other departments at yards.....		28,610.78	
From naval clothing factories.....		884,975.25	
Gain on inventory.....		708.11	
Gain from advanced prices.....		9,713.81	
			4,487,135.14
Receipts on board ships:			
From pay officers.....		3,148,421.64	
Purchases.....		3,296.37	
From United States Marine Corps.....		11,649.21	
From other departments of ships.....		5,276.90	
From ship's stores.....		233.24	
Gain from advanced prices.....		59,596.81	
			3,225,469.17
Total.....			10,849,602.23
		EXPENDITURES.	
Expenditures at yards and stations:			
To pay officers.....		3,927,361.65	
United States Marine Corps.....		592.62	
Revenue-Cutter Service.....		39,098.38	
Lighthouse Service.....		3,399.95	
To naval clothing factory.....		541,896.58	
To other departments at yards.....		77,763.96	
To Naval Militias.....		88,908.05	
Sales for cash.....		6,857.48	
Condemned by survey to loss.....		532.42	
Condemned by survey to be sold.....		121,088.14	
Lost in transit.....		3,612.92	
For use and experimental purposes.....		2,790.96	
			4,813,745.10
Expenditures on board ships:			
To pay officers.....		1,037,891.08	
Issues to crew and marines.....		1,830,213.65	
Issues to civilian crews of auxiliaries.....		4,019.17	
Issues to naval prisoners.....		21,093.65	
To other departments of ships.....		4,479.39	
Sales for cash.....		28,092.19	
To United States Marine Corps.....		167.07	
To ship's stores.....		105,956.61	
Deficit in accounts.....		83.43	
To destitute Americans.....		365.35	
Condemned by survey to loss.....		4,112.94	
Loss on issues.....		2,169.78	
Alterations of clothing.....		196.62	
			3,044,839.96
Balances June 30, 1914:			
On hand at navy yards and stations.....		851,085.90	
On board ships.....		1,133,690.79	
In transit.....		1,098,014.37	
		3,077,797.06	
Less differences between cost and issuing prices.....		89,779.86	
			2,991,017.20
Total.....			10,849,602.23

STATEMENT C—Continued.

TABLE 7.—Statement of clothing and small-stores fund, June 30, 1914.

ASSETS.	
Cash account:	
Balance in United States Treasury.....	\$676,060.91
Stock accounts:	
On hand at navy yards and stations.....	\$851,085.90
On board ships.....	1,133,696.79
In transit.....	1,093,014.37
	<hr/>
Less difference between cost and issuing price.....	3,077,797.06
	86,779.86
	<hr/>
On hand at clothing factories.....	2,991,017.20
On hand condemned to be sold.....	206,850.52
	37,749.69
	<hr/>
Accounts in course of adjustment by the Auditor for the Navy Department:	
For issues, sales, and transfers.....	1,406,532.34
For sales at auction.....	781.53
	<hr/>
	1,406,313.87
	<hr/>
Total.....	5,315,962.19
	<hr/>
LIABILITIES.	
Accounts in course of adjustment by the Auditor for the Navy Department:	
For purchases at navy yards and stations.....	125,417.67
For purchases on ships.....	66.24
For transfers from United States Marine Corps.....	3,816.15
For labor, heat, light, and power at the naval clothing factories.....	21,618.86
For transfers from other departments of yards and ships.....	6,663.26
	<hr/>
Total liabilities.....	157,582.18
Clothing and small-stores fund, June 30, 1914.....	5,158,400.01
	<hr/>
Total.....	5,315,962.19

TABLE 8.—Midshipmen's store fund.

ASSETS.	
Cash on hand in subtreasury, Baltimore, Md.....	\$44,442.65
Merchandise on hand June 30, 1914, as per certified inventory on file in the Bureau of Supplies and Accounts.....	28,472.18
Value of material in tailor shop, June 30, 1914, as per certified inventory on file in the Bureau of Supplies and Accounts.....	645.81
Accounts receivable (from midshipmen and officers).....	6,821.06
Accounts receivable (Naval Academy dairy).....	4,829.74
Horses, harness, and wagons.....	4,402.05
Naval Academy dairy loan.....	40,000.00
	<hr/>
	\$129,613.49
LIABILITIES.	
Accounts payable (balance due on deposits received from midshipmen).....	33,312.99
Accounts payable (balance due merchants for purchases).....	316.12
	<hr/>
	33,629.11
Present worth.....	<hr/>
	90,984.38
GAINS.	
Merchandise.....	11,424.06
Discounts.....	1,858.58
Tailor shop.....	90.97
	<hr/>
	13,373.61
EXPENSES.	
Salaries of clerks and other employees.....	8,142.50
Office fixtures.....	556.24
Miscellaneous expenses.....	670.09
	<hr/>
	9,368.83
Net gain.....	<hr/>
	4,004.18
Worth of fund June 30, 1913.....	86,980.20
	<hr/>
Worth of fund June 30, 1914.....	90,984.38

STATEMENT D.

TABLE 1.—Statement of public sales of condemned Government property.

Date of sales.	Places of sales.	By whom deposited.	Gross receipts.	Expenses of sales.	Net receipts.	Credited to miscellaneous receipts.	Credited to appropriation— Clothing and small stores fund.	Ordinance material, proceeds of sales.
July 26, 1913	Navy yard, Portsmouth, N. H.	James S. Phillips.	\$101.00		\$101.00	\$101.00		
Oct. 21, 1913	do.	Charles Conard.	10,193.84	\$653.45	9,540.39	9,137.97	\$33.42	\$72.80
Feb. 27, 1914	do.	do.	148.00	7.00	141.00	148.00		
Aug. 21, 1913	Navy yard, Boston, Mass.	J. S. Carpenter.	308.00		308.00	308.00		
Oct. 21, 1913	do.	G. P. Dwyer.	13,198.94	2,030.53	11,168.41	11,168.41		
Nov. 1, 1913	Naval torpedo station, Newport, R. I.	John W. Morse.	515.04	18.46	496.58	496.58		442.15
Nov. 12, 1913	Naval training station, Newport, R. I.	T. S. O'Leary.	391.41	4.96	386.45	386.45		
May 12, 1914	do.	George Phipps.	73.17	3.00	70.17	73.17		
Nov. 5, 1913	Navy yard, New York, N. Y.	Jonathan Brooks.	100.00		100.00	100.00		
Nov. 10, 1913	do.	do.	10,722.96	5,261.37	5,461.59	2,674.38	1,786.11	1,037.10
Feb. 24, 1914	do.	do.	19,229.47	31.03	19,198.45	19,198.45		
Jan. 29, 1914	Navy yard, Philadelphia, Pa.	H. A. Dent.	75.60		75.60	75.60		
Jan. 20, 1914	do.	Robert H. Orr.	12,967.83		10,113.50	8,615.84	570.64	935.73
Nov. 24, 1913	Naval Home, Philadelphia, Pa.	H. A. Dent.	104.00	2,584.35	104.00	104.00		
May 5, 1914	do.	do.	35.87		35.87	35.87		
Nov. 3, 1913	Naval Academy, Annapolis, Md.	M. M. Ramsey.	238.91		238.91	238.91		
May 24, 1914	do.	do.	8,293.70	3,977.53	4,316.17	174.55	3.41	4,138.18
June 6, 1913	Navy yard, Washington, D. C.	R. H. Woods.	3,626.50	77.50	3,549.00	3,549.00		
Sept. 16, 1913	do.	do.	3,432.74	9.80	3,422.94	3,422.94		
Oct. 17, 1913	do.	do.	18,174.58	6,049.55	11,525.03	1,104.05		10,420.97
Dec. 2, 1913	do.	do.	778.76	45.00	733.76	733.76		637.05
Feb. 6, 1914	do.	do.	9.00		9.00	9.00		
Feb. 17, 1914	do.	do.	26.00		26.00	26.00		
June 23, 1914	do.	do.	6.00		6.00	6.00		
June 23, 1914	do.	do.	687.05		687.05	687.05		
July 24, 1912	Naval proving ground, Indianhead, Md.	B. H. Brooke.	1,336.24	.45	1,335.79			1,335.79
July 14, 1913	Navy yard, Norfolk, Va.	F. R. Holt.	1,580.17	75.84	1,504.33	504.33		
Sept. 5, 1913	do.	do.	6.00		6.00	6.00		
Nov. 15, 1913	do.	do.	101.92		101.92	101.92		
Nov. 26, 1914	do.	F. T. Foxwell.	6.00		6.00	6.00		
Apr. 6, 1914	do.	do.	30.59		30.59	30.59		
Apr. 6, 1914	do.	do.	4,702.85	194.92	4,507.93	4,514.23		58.71
June 11, 1913	Navy yard, Charleston, S. C.	G. A. Helmholz.	2,208.08	8.00	2,200.08	2,194.43		
Oct. 27, 1913	Navy yard, Mare Island, Cal.	C. M. Ray.	2,767.20	6.75	2,760.45	2,760.45	5,085.01	
Jan. 20, 1914	do.	do.						

July 11, 1913	Navy yard, Puget Sound, Wash.	R. Nicholson.	2,132.80	341.75	1,791.05	1,791.05
Dec. 1, 1913	do.	do.	5,746.34	1,087.63	4,658.71	4,658.71
Feb. 19, 1914	do.	H. H. Alkire.	27,708.67	426.36	27,282.31	27,282.31
Sept. 12, 1913	Naval station, Cavite, P. I.	T. F. Ballenger.	17,400.00	87.15	17,312.85	17,312.85
do.	do.	do.	454.95	30.43	424.52	424.52
Feb. 10, 1914	do.	do.	2,422.82	3.42	2,419.40	2,419.40
Mar. 31, 1914	Miscellaneous (the Panama Canal)	V. C. Miller.	1,431.68	268.63	1,163.05	1,163.05
June 19, 1914	do.	do.	1,431.68	268.63	1,163.05	1,163.05
May 26, 1914	U. S. S. Scorpion.	J. A. Byrne.	280.19		280.19	280.19
			175,670.30	23,774.65	151,895.65	151,895.65
					26,831.39	19,342.59

STATEMENT D—Continued.

TABLE 2.—List of purchasers of condemned Government property, with amounts received from each.

Navy yard, Portsmouth, N. H., July 26, 1912, George J. Stafford.....	\$101.00	Naval torpedo station, Newport, R. I., Nov. 1, 1913:	
Navy yard, Portsmouth, N. H., Oct. 21, 1913:		Walter Loring.....	\$6.00
C. H. Stewart.....	37.38	William Caswell.....	45.10
Atlantic Marine Exchange.....	122.90	John Smith.....	6.30
Honore Mitchell.....	40.80	Max David.....	284.68
Backnoff Bros. & Bernstein.....	311.66	James O'Brien.....	6.00
Thomas J. Burke.....	153.65	S. Butter & Co.....	168.52
I. Barth & Son.....	121.21		515.96
American Iron & Metal Co.....	311.63	Naval training station, Newport, R. I., Nov. 12, 1913:	
Ferry, Buxton, Doane Co.....	4,389.70	Nathan Damm.....	356.46
John Yarwood.....	349.39	A. F. Speedwell.....	5.10
L. W. Osborn.....	87.25	Max David.....	6.88
C. A. Badger.....	19.00	W. H. Sellers.....	15.08
The Army & Navy Store Co. (Inc.).....	76.70	James S. O'Brien.....	3.27
W. S. Nolan.....	12.11	Michael T. O'Leary.....	4.70
Richard H. Horan.....	25.00		391.41
A. Vanacore.....	1,150.99	Naval training station, Newport, R. I., May 12, 1914, Max David.....	76.17
Levi Bernstein.....	68.43		
Cal. Hirsch & Sons, I. & R. Co.....	33.85	Navy yard, New York, N. Y., Nov. 5, 1913, United House Wrecking Co.....	100.00
G. O. Wilson, Jr.....	86.00	Navy yard, New York, N. Y., Nov. 10, 1913:	
Jacques & Curran.....	55.50	Army & Navy Store Co.....	176.50
H. F. Stults.....	54.21	I. Kaplan.....	114.17
Sam Hoos.....	95.64	Frances Bannerman.....	231.16
Columbia Smelting & Refining Works.....	359.69	Carl Hirsch & Son I. & R. Co.....	2,562.98
J. Lipsetts.....	1,908.62	W. Stokes & Kirk.....	359.15
I. M. Gerber.....	138.76	Al. A. Rosenbush & Co.....	677.10
Guttersen & Gould.....	34.50	I. Kamras.....	62.42
Atlantic Junk Co.....	16.27	John R. Anderson.....	152.00
	10,059.84	Snelling & Son.....	81.46
Navy yard, Portsmouth, N. H., Feb. 27, 1914, C. H. Stewart.....	165.00	J. J. Reynolds.....	13.88
Navy yard, Boston, Mass., Aug. 21, 1913, Michael Burns.....	205.00	M. Karger.....	47.08
Navy yard, Boston, Mass., Oct. 10, 1913:		Henry C. Briggs.....	111.90
Atlantic Junk Co.....	160.16	A. Schrader's Son.....	7.50
Atlantic Marine Exchange.....	192.57	N. F. Levy.....	30.50
S. Berkman.....	4.13	Kirtland Bros. & Co.....	950.89
J. F. Brown.....	2.60	John J. Nuttall.....	231.00
Thomas J. Burke.....	543.25	McGibbon Engine & Iron Works.....	42.95
S. Butter & Co.....	162.56	David Marks.....	286.49
Thomas Butler & Co.....	659.30	National Woolen Co.....	22.16
W. L. Carlton.....	12.50	R. Tobin & Son.....	888.12
E. F. Connors.....	3.00	Charles A. E. Fiesme.....	42.14
John Connors.....	344.50	Adolph Heyenfeld.....	72.35
Joe Cotter.....	124.00	H. Lewinski.....	11.20
G. W. Darlow.....	85.50	Phillip S. Frances.....	16.20
M. F. Droschill.....	29.60	E. M. Moers.....	19.58
C. Dugan.....	6.25	R. G. Packard.....	167.28
G. T. Dyer.....	15.15	Jacobus & Grauwiler.....	26.00
Goldberg & Edinberg.....	42.50	Emil Schneider.....	251.95
Guttersen & Gould.....	18.50	F. B. Cutter & Co.....	435.00
F. Hammond.....	8.06	Thomas Yearley.....	300.10
F. A. Hall's Sons.....	2,562.02	William M. Meyers.....	30.53
A. C. Harvey.....	308.36	George Bender.....	277.00
J. A. Higgins.....	26.11	C. Osterman.....	10.75
C. Hitchins.....	52.00	Joseph Wolff.....	93.69
Hollingsworth & Vose Co.....	138.25	Joseph Baurer.....	11.47
W. J. Hopkins.....	5.05	Gus. Johnson & Co.....	70.39
M. E. Jenkins.....	31.50	Michael Flynn.....	107.25
C. J. Jones.....	26.25	M. R. Rodrigues.....	56.13
J. P. MacKinnon.....	19.50	Beckler & Birenbaum.....	12.35
Jno. C. Mason.....	16.67	John Faganucci.....	18.75
Louis Miller & Co.....	31.02	L. F. Selferts & Son.....	62.56
N. Morrison.....	17.00	Marck McCuskey.....	738.00
Joseph Myerson.....	46.96	G. F. Sediny.....	10.75
W. S. Nolan.....	136.33	B. I. Winn.....	25.00
H. Oltman.....	145.00	George G. Raymond.....	55.00
Albert E. Page.....	176.50	Alexandria Benzie.....	3.00
M. J. Power.....	8.00	Adolph Bernsen.....	26.00
C. H. Riley.....	11.60	H. Solfrancy Co.....	553.27
H. Stein.....	3.00		10,722.96
F. L. Struthers.....	26.21	Navy yard, New York, N. Y., Feb. 24, 1914:	
Torgren Bros.....	4.55	Samuel L. Rosenberg.....	11,301.22
M. J. Turnbull.....	5.00	F. B. Warner Co.....	7,239.47
Wolff & Klein.....	1,281.56		19,239.47
E. F. Woods.....	9.25		
Perry, Buxton, Doane Co.....	5,687.12		
	13,198.94		

STATEMENT D—Continued.

TABLE 2.—List of purchasers of condemned Government property, with amounts received from each—Continued.

Navy yard, Philadelphia, Pa., Jan. 19, 1914, George I. Mulligan.....	\$75.60	Navy Yard, Washington, D. C., May 9, 1913—Continued.	
Navy yard, Philadelphia, Pa., Jan. 20, 1914:		Louis Simon.....	\$1,388.96
W. S. Kirk.....	83.00	J. Stuls.....	8.00
J. J. Chaulek.....	125.54	Williams & Freedman.....	263.06
Dreifus & Co. (Inc.).....	917.52		8,293.70
Fred Graemer.....	454.09	Navy yard, Washington, D. C., June 16, 1913:	
P. S. Francis.....	67.40	Reichert Towing Co.....	2,550.00
S. Hurley.....	125.96	H. A. Hittner's Son & Co.....	1,076.50
Atlantic Manufacturing Co.....	284.37		3,626.50
A. Schiller.....	10.50	Navy yard, Washington, D. C., Sept. 16, 1913:	
E. F. Pearman.....	14.31	Columbia Smelting & Refining Co....	375.00
W. M. Myers.....	6.76	Ben Einstein.....	44.74
Coatesville Scrap Iron Co.....	310.44	Cook, Bernheimer & Co.....	13.00
Luria Bros. & Co.....	1,707.67		432.74
W. A. Buxton Machinery Co.....	981.01	Navy yard, Washington, D. C., Oct. 17, 1913:	
Frank Samuel.....	12.75	Thomas Alward.....	320.80
Columbia Smelting & Refining Co.....	249.18	Bernheimer & Co.....	16.00
Illinois Smelting & Refining Co.....	855.50	Frank P. Davis.....	187.50
C. S. Wanhop.....	31.00	Emil Schneider.....	109.65
E. Billeter.....	75.00	J. Dreifus & Sons.....	311.00
H. L. Winter.....	181.00	Ben Einstein.....	124.78
J. Rosenthal's Sons.....	797.22	Henry A. Hittner's Sons.....	1,977.58
A. Carlson.....	57.00	Jno. Leonard & Co. (Inc.).....	11,082.52
A. B. Knoblauch.....	3.65	Luria Bros. & Co. (Inc.).....	302.30
H. W. Barraclough.....	.60	Joseph L. Schmitt.....	682.04
W. H. Keller.....	14.75	H. J. Segall.....	16.92
Pennsylvania Equipment Co.....	43.34	Simon & Krivitsky.....	3,072.94
Boston Iron & Metal Co.....	394.25		18,174.68
L. C. Pontes.....	77.80	Navy yard, Washington, D. C., Dec. 2, 1913:	
E. Damage.....	162.20	White Bros.....	255.00
Burcher & Bros.....	16.74	Cook, Bernheimer & Co.....	21.75
B. B. Abrahams.....	3.08	A. D. Alexander.....	26.00
H. Kaplan.....	21.25	H. J. Segall.....	34.48
Perry, Buxton, Doane Co.....	604.41	W. F. Nash.....	41.75
S. J. Powkes.....	55.00	Boston Iron & Metal Co.....	361.28
T. Rudolph.....	.75	J. Dreifus & Sons.....	39.50
H. A. Hittner's Sons Co.....	3,013.47		779.76
M. Rosenfeld.....	7.00	Navy yard, Washington, D. C., Feb. 6, 1914: A. Einstein.....	9.00
P. Spergel.....	78.00	Navy yard, Washington, D. C., Feb. 17, 1914: B. P. Burns.....	25.00
I. J. Reynolds.....	801.77	Navy yard, Washington, D. C., June 10, 1914: H. A. Barry.....	5.00
C. Hirsch & Sons I. & R. Co.....	478.34	Navy yard, Washington, D. C., June 23, 1914: Columbia Smelting & Refining Co.....	687.06
L. Goldstein's Sons.....	39.00	Naval Proving Ground, Indian Head, Md., July 24, 1912:	
A. Peres & Son.....	10.00	Butterworth-Judson Co.....	1,111.24
J. M. Tomb.....	25.23	Illinois Smelting & Refining Co.....	225.00
	12,697.85		1,336.24
Naval Home, Philadelphia, Pa., Nov. 24, 1913, Joseph F. Schiller.....	104.00	Navy yard, Norfolk, Va., July 14, 1913:	
Naval Home, Philadelphia, Pa., May 5, 1914, G. A. Dunning.....	25.57	H. J. Segall.....	312.93
Naval Academy, Annapolis, Md., Nov. 3, 1913:		D. D. Hitchings.....	21.00
Howard W. Reed.....	156.71	M. T. Cashin.....	144.84
Woodford & Thomas.....	209.32	John E. Mapp.....	20.00
	366.03	A. J. Phillips.....	56.75
Naval Academy, Annapolis, Md., Mar. 24, 1914:		Chas. S. Aydelotte.....	24.65
P. H. Magruder.....	87.50		580.17
William A. Hamlen.....	141.41	Navy yard, Norfolk, Va., Sept. 5, 1913:	
	228.91	L. H. Brown.....	5.00
Navy yard, Washington, D. C., May 9, 1913:		Navy yard, Norfolk, Va., Nov. 15, 1913:	
A. D. Alexandria.....	30.00	J. L. Benton.....	30.58
Atlantic Marine Exchange.....	17.78	J. A. Mattox.....	71.34
J. Dreifus & Son.....	17.50		101.92
Dreifus & Co. (Inc.).....	267.80		
Ben Einstein.....	41.06		
Philip S. Francis.....	62.75		
E. J. Kelly.....	28.75		
F. J. Einstein.....	17.75		
E. B. Leaf Co.....	3,228.30		
Lehman Bros.....	1,073.02		
M. Samuels & Sons (Inc.).....	1,200.00		
H. J. Segall.....	135.97		
L. F. Seyfert's Sons (Inc.).....	518.00		

STATEMENT D—Continued.

TABLE 2.—List of purchasers of condemned Government property, with amounts received from each—Continued.

Navy yard, Norfolk, Va., Mar. 25, 1914:		Navy yard, Puget Sound, Wash., Dec. 1, 1913—Continued.	
W. S. Foster.....	\$6.00	Frank Givens.....	\$4.72
Navy yard, Norfolk, Va., Apr. 6, 1914:		Mrs. C. E. Graybad.....	12.25
C. H. Ripley.....	11.00	P. A. Hallberg.....	8.00
J. A. Mattox.....	19.59	Sam Henderson.....	14.07
	30.59	Cal. Hirsch & Sons.....	19.91
Navy yard, Charleston, S. C., June 11, 1913:		J. W. Hofius.....	225.00
Chas. Canddon.....	34.59	Independent Asphalt Paving Co.....	45.39
W. M. Sanders.....	6.85	R. Jasperson.....	12.20
J. Hyland.....	2.65	Mrs. Jonas Johnson.....	2.00
Charles Steel & Metal Co.....	2,737.73	Geo. Kaness.....	25.20
J. A. Hughes.....	10.00	A. F. Kell.....	8.75
C. L. Sorensen.....	8.00	T. H. Kendall.....	.75
Mill Scrap & Rubber Co.....	19.00	Kilbourne & Clark Manufacturing Co.....	2.00
S. C. Smelgrove.....	.75	King & Winge.....	115.80
Bell Bros. & Co.....	1,003.41	J. Webb Kitchen & Co.....	50.90
B. Shapiro.....	795.27	J. P. Kirk.....	345.07
H. B. Brown.....	30.25	E. Larson.....	3.40
L. W. Hickok.....	1.00	C. H. Macomber.....	.90
H. V. Walker.....	2.20	Ben Marcus.....	337.25
A. Bainbridge.....	12.00	E. B. McCann.....	5.10
C. Feldman.....	6.05	R. F. McCluskey.....	2.10
T. Hildreth.....	2.10	C. H. McCoy.....	5.05
	4,762.85	Wm. E. Melker.....	14.04
Navy yard, Mare Island, Cal., Oct. 27, 1913:		M. Melker.....	1.52
United Auction & Salvage Co.....	1,027.83	O. R. Merrill.....	65.65
J. E. Godley.....	1,139.00	W. J. Millenbach.....	8.70
Buckingham & Hecht.....	5,041.20	Wm. H. Murphy.....	5.55
	7,208.08	R. Nightingale.....	20.30
Navy yard, Mare Island, Cal., Jan. 20, 1914:		Northwestern Junk Co.....	493.02
J. E. Godley.....	2,175.00	Andrew Olson.....	4.00
United Auction & Salvage Co.....	272.20	Mrs. August Ostrom.....	10.80
Louis Baroni.....	310.00	Panama Junk Co.....	208.06
	2,757.20	P. W. Peterson.....	1.25
Navy yard, Puget Sound, Wash., July 11, 1913:		Mrs. C. E. Price.....	.25
Walter Allen.....	67.50	W. M. Price.....	5.00
I. B. Annett.....	60.00	R. F. S. Puck.....	32.52
G. L. V. Antwerp.....	24.00	A. H. Rambo.....	6.25
Bert L. Douglas.....	242.00	Frank Risser.....	7.30
Ed. Emel & M. Goodglick.....	602.70	C. M. Rivers.....	7.50
E. P. Jameson.....	226.00	Mrs. A. Schriener.....	8.77
King & Winge.....	241.00	Frank Schwartz.....	1,772.57
Marcus.....	55.75	Als Sherman.....	68.05
R. O. Marcy.....	237.25	W. G. Southerland.....	.25
John P. Mil.....	31.50	Star Machinery Co.....	333.30
P. C. Peterson.....	12.50	F. H. Starks.....	20.50
C. H. Schaefer.....	126.00	Tacoma Junk Co.....	142.15
Walter Stocker.....	64.00	E. J. Taylor.....	15.00
H. M. Thornton.....	17.85	C. E. Thomas.....	9.15
Sam Trankle.....	70.25	United Salvage Co.....	12.25
	2,132.80	Vashon Island Fruit Co.....	21.60
Navy yard, Puget Sound, Wash., Dec. 1, 1913:		Walls & Sons (Inc.).....	13.25
Wm. Anderson.....	2.90	J. E. Wilson.....	.60
W. R. Bankhead.....	.50	U. R. Zivnaska.....	2.77
M. Barde & Sons.....	396.80		5,746.94
A. R. Bissett.....	153.50	Navy yard, Puget Sound, Wash., Feb. 12, 1914: Ben Marcus.....	
Burks Hardware Co.....	8.94		27,708.67
Frank Clay.....	5.07	Naval station, Cavite, P. I., Sept. 12, 1913: Madrigal & Co.....	
S. Cone.....	15.65		17,400.00
C. J. De Serisy.....	65.00	Naval station, Cavite, P. I., Feb. 10, 1914:	
B. L. Douglas.....	3.50	Co Behe.....	171.80
J. C. Duke.....	251.00	V. Decalk.....	165.45
H. O. Emmons.....	32.70	M. Goldstein.....	27.00
Max Esfield.....	23.84	Felix Berusta.....	14.00
F. H. Finson.....	2.50	Madrigal & Co.....	107.00
V. G. S. Fischer.....	6.90		484.95
E. J. Fisher.....	4.28	Miscellaneous (the Panama Canal) June 11, 1914: Columbia Smelting & Refining Co.....	
Rowe France.....	1.00		1,430.05
Emil Friedricks.....	8.00	Miscellaneous (the Panama Canal) Mar. 31, 1914: Columbia Smelting & Refining Co.....	
R. B. Fryett & T. M. Libby.....	20.35		3,422.62
Geo. Genser.....	22.95	U. S. S. Scorpion, May 29, 1914:	
		Omar Abed Han.....	127.75
		The Marine & General Engineering Co. (Ltd.).....	131.44
			259.19

STATEMENT E.

Fiscal year ending June 30, 1914.

Month.	Number of classes advertised.	Number of schedules issued.	Number of copies of schedules distributed.	Number of firms bidding.	Total number bids received.	Average bids per class.	Number of contracts and bureau orders.	Total value of contracts and bureau orders.	Number of specifications in use.
1913.									
July.....	283	76	62,800	630	1,753	6.19	204	\$2,644,525.46	.....
August.....	237	86	64,500	506	1,424	6.01	168	2,463,509.85	.....
September.....	333	117	90,700	379	2,654	6.94	261	792,960.76	.....
October.....	201	86	62,100	602	1,319	6.56	169	471,990.90	.....
November.....	363	74	56,200	651	2,184	5.96	204	1,049,667.07	.....
December.....	499	110	88,700	1,068	3,556	7.12	399	1,050,208.25	.....
1914.									
January.....	350	113	91,700	924	2,480	7.09	290	777,861.84	.....
February.....	346	128	99,100	989	2,056	5.94	307	1,440,548.13	.....
March.....	408	149	120,700	1,284	3,161	7.74	358	790,850.12	.....
April.....	644	117	99,800	1,120	4,221	6.55	420	3,728,876.26	.....
May.....	448	113	96,600	974	3,042	6.79	318	1,588,218.77	.....
June.....	729	156	138,800	1,371	4,727	6.49	510	1,990,090.45	.....
Total fiscal year 1914.....	4,896	1,325	1,071,700	11,000	32,557	6.65	3,578	17,201,064.86	1,057
Total fiscal year 1913.....	3,981	931	751,600	8,080	21,345	5.36	2,916	14,796,596.07	974

STATEMENT F.

Showing the receipts and expenditures of clothing and public property of the Marine Corps during the fiscal year 1914, and the balances on hand July 1, 1913, and June 30, 1914.

	Clothing.	Public property.	Total.
RECEIPTS.			
Balance on hand July 1, 1913.....	\$1,028,349.56	\$2,367,621.32	\$3,395,970.88
Received during fiscal year 1914.....	673,173.50	1,710,843.75	2,384,017.25
Increase in value (G. O. No. 59, N. D., Nov. 15, 1913).....	38,010.30	.....	38,010.30
On hand and received.....	1,739,533.36	4,078,465.07	5,817,998.43
EXPENDITURES.			
Expended by regular issues.....	504,404.35	.....	504,404.35
Expended by extra issues (sold, etc.).....	90,468.07	61,505.30	151,973.37
Expended for use, manufacturing, etc.....	59,089.50	690,888.32	749,977.82
Decrease in value (G. O. No. 59, N. D., Nov. 15, 1913).....	.....	35,636.53	35,636.53
Condemned by survey.....	81,785.09	182,576.45	264,361.54
Total expenditures.....	735,747.01	970,806.60	1,706,553.61
Balances on hand June 30, 1914.....	1,008,786.35	3,107,658.47	4,111,644.82

REPORT OF THE SURGEON GENERAL, UNITED STATES NAVY.¹

DEPARTMENT OF THE NAVY,
BUREAU OF MEDICINE AND SURGERY,
Washington, D. C., September 16, 1914.

To: Secretary of the Navy.

Subject: Annual report for fiscal year 1914.

The following report of the activities of the bureau is submitted.

During the year from December 31, 1912, to January 1, 1914, the health of the Navy was good, and there was a satisfactory improvement over the preceding year, as shown by the following table, which gives the admissions and readmissions, sick days, and deaths per 1,000 of the personnel of the Navy and Marine Corps for the average year, for 1912 and for 1913.

Term.	Admissions and readmis- sions, all causes.	Sick days.	Deaths.
Average, years 1901-1910.....	897.35	10,871.12	5.38
1912.....	787.46	9,449.39	4.06
1913.....	760.03	10,041.41	3.82

The slight, but steady, improvement which has continued year by year for a considerable period is noted also for the year 1913.

DISEASES OF SPECIAL INTEREST.

MALARIA.—The incidence of this disease increased from 11.63 per thousand in 1912 to 12.07 in 1913. This increase is accounted for by the cases occurring on ships in Mexican waters. The value of screening was well demonstrated, those ships which were well screened escaping the disease or having only a few cases, while unscreened ships under the same conditions had a large number of cases. Efforts to prevent breeding of mosquitoes have been continued at all stations and have been successful except at certain places, particularly Annapolis, Mare Island, and Philadelphia, where breeding continues in areas adjacent to naval stations.

DIPHTHERIA.—Admissions increased from 0.93 per thousand in 1912, to 1.10 in 1913. As in 1912, there were no deaths from this disease. Several epidemics occurred during the year, but by early detection and isolation they were quickly controlled.

¹All statistics of health cover the calendar year 1913.

SMALLPOX ON U. S. S. "OHIO."—An outbreak of smallpox on the *Ohio* began in December, 1913, and there were 29 cases with 5 deaths.

The *Ohio* and *Vermont* visited Marseille and remained there for about a month. Liberty was freely granted during this time. Smallpox of a virulent type was known to be present in Marseille, and the weekly Public Health Reports, issued by the Public Health Service, showed many cases occurring, with a high mortality. The crew of the *Vermont* was carefully examined and general vaccination done before leaving for European waters. No smallpox appeared on the *Vermont*, although her men were exposed in the same manner as those of the *Ohio*.

There is no record of any vaccination having been done on the *Ohio* for two years before this outbreak, and vaccination of this crew immediately after gave 89.57 per cent of "takes," about what would be expected in an unprotected community.

The medical officer of the Naval Station, Guantanamo, states: "Of the 25 cases of smallpox received, 11 were of a serious confluent variety, and some of the 11 were malignant and hemorrhagic. In none of these cases could I find any scar of successful vaccination. The remaining 14 cases were all mild—varioid in fact. All of these showed vaccination marks."

A draft of 100 recruits was received on the *Ohio* shortly before sailing for Europe. These men were freshly vaccinated, and no smallpox occurred among them.

As a result of this epidemic the *Ohio* was useless for military purposes for a long time, a considerable expense was incurred, and an incalculable amount of suffering endured by the personnel of the *Ohio* and by the relatives and friends of those on board. The incident shows the necessity for the greatest care on the part of every medical officer in assuring himself that every man for whom he is responsible is protected. This bureau has recommended certain changes in the Navy Regulations and Instructions which, if adopted, will decrease the chances of other outbreaks by adding to the thoroughness of protection. It should here be emphasized that the only satisfactory evidence of successful vaccination is the *pitted* vaccination scar.

TYPHOID FEVER.—The incidence of this disease in the service for the past five years is shown by the following table:

Typhoid fever.

Year.	Admitted.		Died.	Sick days.
	No.	Rate per 1,000.		
1909.....	189	2.20	17	10,378
1910.....	193	2.20	10	9,436
1911.....	223	2.61	15	14,094
1912.....	57	.92	2	5,394
1913.....	22	.33	4	1,667

It will be noted that a considerable decrease from 1912 occurred, and that the admissions in 1913 were less than 10 per cent of those in 1911. This is gratifying, but not satisfactory, since the Army, by

the same means, has practically eradicated the disease. Omissions and clerical errors occur whereby men escape inoculation, and through conditions of transportation the prophylactic may be deteriorated when received at distant stations. These conditions require close study, and every effort will be made to discover and correct material or personal shortcomings which interfere with perfect protection against the disease.

No one knows how long the immunity produced by the prophylactic will last. This question will arise. In fact, it has arisen already, and every effort should be made to attempt the solution of this question. The advice and work of our own specialists in connection with those of the Army and Public Health Service, it is hoped, will give us this information before the immunity is lost. A word of caution is needed. The tendency is to rest on a feeling of security developed by the results of the past two years, and any lack of care on the part of the individual medical officer to assure himself that every man under his care is absolutely protected may lead to failures.

TUBERCULOSIS.—The incidence of this disease is about the same as for the preceding year. Of the 367 patients treated during 1913 at the Naval Hospital, Las Animas, Colo., the Navy's sanatorium for tuberculosis, 10.3 per cent had concurrent syphilis. This complication adds greatly to the gravity of the disease, and when combined with alcoholism, as frequently occurs, the outlook is practically hopeless. Treatment by inhalation of creosote has given encouraging results. The treatment by graded rest and labor has been further elaborated and has fully justified all the expectations of those responsible for its adoption.

The Government maintains three sanatoria for tuberculosis, the Army, the Public Health Service, and the Navy having separate institutions, which are maintained at great expense. It is believed that these could be combined, and that a single institution could care for the patients of all three services at a greatly reduced expense and with no loss of efficiency. While the joint use of hospitals is not considered practical or desirable under usual conditions, the objections do not obtain in the case of tuberculosis sanatoria, since the patients of these institutions are rarely returned to duty, and their military efficiency may be considered as ended when treatment in a tuberculosis hospital is found necessary.

VENEREAL DISEASES.—The incidence of venereal infection shows a considerable decrease from that of 1912, as shown by the admissions per 1,000 in the following table:

Disease.	* 1911	1912	1913
	Admissions per 1,000.	Admissions per 1,000.	Admissions per 1,000.
Gonorrhea.....	92.15	87.29	80.69
Syphilis.....	27.11	23.00	21.04
Chancroid.....	31.41	36.04	28.13
Combined.....	150.68	146.33	130.78

To some extent this decrease is probably to be placed to the credit of the system of venereal prophylaxis and the increasing use of preventive packets which are purchased by the men. It must be borne in mind, however, that liberty has been granted less freely during this year than during the average year because of the presence of many ships for long periods in Mexican waters.

The present system of prophylaxis has been in force for about three years and it is now possible to draw definite conclusions as to its efficacy. In the Atlantic Fleet, from each ship of which uniform reports are available, the percentage of infection after prophylaxis for 1912 was 2.47 and for 1913, 3.47. The figures for these two years are so closely approximated that it is reasonable to assume that a standard for the method has been reached.

The Army works under a law which deprives all persons of their pay while unfit for duty by reason of this class of disease, and their experience with it has been such as to justify a strong recommendation for similar legislation in the Navy.

APPENDICITIS.—The incidence was practically the same as in 1912. In the Atlantic Fleet there were 173 cases with no deaths in 1912, and 168 cases with no deaths in 1913, a very creditable showing.

ALCOHOLISM.—Admissions for this condition continue to decrease and the comparison of figures for 1913 with those of the preceding three decades indicates the improvement in this direction.

Period.	Complement.	Admissions.	Rate per 1,000.
1882-1892.....	11,775	291	24.71
1892-1902.....	31,240	243	7.80
1902-1912.....	61,897	241	3.89
1913.....	65,926	228	3.46

The efficiency of the habitual drinker is so lessened that he can not hold his own with rivals for advancement whose faculties are always alert. Men live in such close association on board ship that one who indulges in alcohol to excess causes discomfort to many others, who will not tolerate his presence. The development of this attitude of the men, with the recent order prohibiting the introduction of alcoholic liquors on ships and at stations, should cause a still greater reduction in alcoholism.

MENTAL DISEASES.—During the year of 1913 there was a slight increase in the rate for mental diseases over the previous year. The following table will show the rate for mental disorders since 1910:

1910 rate for mental disorders.....	5.20
1911 rate for mental disorders.....	4.25
1912 rate for mental disorders.....	3.97
1913 rate for mental disorders.....	4.11

The rate per 1,000 of those invalided from the service for mental disorders during the year 1913 was larger for the Marine Corps than for the Navy, the rate for the Navy being 1.81 per 1,000 against a rate of 2.33 per 1,000 for the Marine Corps. About 10 per cent of those admitted for mental diseases during the year were surveyed from the service within four months of the time of enlistment. A satisfactory method of detecting the mentally weak is receiving careful consideration by the Medical Department. A modification of the Binet-Simon

method with suitable mental tests has been devised by Acting Asst. Surg. A. R. Schier, and his article has been published in the Naval Medical Bulletin and also has been published in the form of a reprint by the Marine Corps Publicity Bureau. At the same time careful mental examinations have been conducted by Passed Asst. Surg. G. E. Thomas at the naval prison, Portsmouth, N. H., using the Binet-Simon and other methods.

At the disciplinary barracks, Port Royal, S. C., examinations of this character have also been conducted by the medical officer and the material returned has been carefully studied. The subject has also received careful study by the medical officer stationed at the Government Hospital for the Insane with a view to devising, if possible, some mental test which would eliminate those liable to develop mental disorders or to become offenders against naval discipline.

The detection and exclusion of individuals of this class at the recruiting stations would not only greatly reduce the cost at the prisons and hospitals, but serve as an economic aid to other bureaus having to do with the personnel. This bureau is not satisfied that any of the intelligence tests used up to date are sufficiently exact to do any more than approximate the mental status of the individual under examination. It would appear that where the individual is examined by two or more examiners at different times different results are apt to be established, and while the results may not vary greatly, the difference is sufficient to show the unreliability of the test. Furthermore, the application of this test to 300 prisoners and to persons in the prison guard rated as good soldiers affords results which are disconcerting if we are to place any reliance upon the method. For instance, the results obtained from a group of 3 sergeants, 4 corporals, and 3 privates of the marine guard selected as above the average of efficiency show that the average mental age established was below that of the 300 prisoners under their care. In fact, the medical officer making the examination said that "if the Binet-Simon tests were applied to these men on enlistment and the maximum required, not one of them would have been taken into the service."

Furthermore, some of the prisoners whose records show them to be most undesirable in every way could pass a satisfactory examination by the Binet-Simon method, and would thus have been admitted to the service.

It therefore appears that the intelligence tests applied up to date are not satisfactory in determining the individual's degree of mentality, independent of other considerations.

The problem is one of considerable interest to the bureau because of its economic bearing on the service and the present lack of any satisfactory method of determining the mental status of the applicant for enlistment. Results which would justify a recommendation for the adoption of any system have not yet been accomplished; but the investigation will be continued until the advisability or inadvisability of adopting a mental examination before enlistment is determined.

SANITARY CONDITIONS AND MEASURES AFLOAT.

RATION.—The Navy ration is considered excellent in quality and sufficient in quantity. If any criticism can be made, it is that the quantity of meat and fats is too great, especially in the Tropics.

A reduction in these, with an increase in vegetables, would be of advantage. Fruit is a most important element of the ration and the beneficial effects of fresh fruits are often observed. The quantity of fruit in the ration should be increased on going to sea, and much of the prevalent constipation would thus be obviated.

TOILETS.—The type of toilet equipment with which ships are now fitted has been found faulty in many respects and it is believed that a more satisfactory type could be obtained. Toilets should be installed in isolation wards and the bureau is informed that the ships about to be built will have toilets adjacent to isolation wards and restricted to use by the occupants of such wards. The present condition necessitates the use of close stools and these often have to be carried for a long distance and through several compartments before they can be emptied. Thus the danger of spreading contagious disease is greatly increased and the efforts at isolation are largely nullified.

CLOTHING.—The disadvantages of the white uniforms, to which attention has so often been called, were again illustrated when it became necessary to send the bluejackets ashore during the operations at Vera Cruz. As a makeshift, some of the men dyed their whites with a solution of iron sulphate; but this was far from satisfactory and would seldom be feasible. Several types of fabrics, such as khaki and forestry green, are available and would be more suitable for wear on board ship and particularly for expeditionary forces on shore; they have been adopted by many military organizations and their adoption by the Navy would be a great improvement over present conditions.

FIRST-AID INSTRUCTION.—Following a general order from the commander in chief, more interest has been shown in the giving of first aid to the enlisted personnel by division officers.

In some cases the officers show commendable zeal and a sense of the importance of this instruction, so valuable not only under actual fighting conditions but also for daily use. However, the feeling is that in general many officers do not realize the importance of this work and do not carry out the provisions of the order in regard to the instruction with the spirit and zeal to be desired. After two years of observation it is still a question if it would not be better to return to the former system of giving first-aid instruction by the medical officer and hospital corpsmen of each ship. The divisional officer does not feel that he is qualified or that it pertains to his duties. All active and interested medical officers rather feel that this work specially belongs to them; most of them feel that they have the time to give the instruction. It would also permit the medical officers to come in close contact with enlisted men and enable them to supplement the present meager instruction in first aid with many hygienic hints and suggestions as to their mode of life, and to call attention from time to time to points pertaining to the special locality or conditions existing. It is believed that careful consideration should be given this matter, possibly a board appointed to consider the question in all its phases and that, having determined how the object desired is best to be obtained, final and stringent steps should be taken to see that this work is not neglected.

HOSPITAL SHIP.—The hospital ship is generally conceded to be of the greatest value and it gives a real security, when present with the

fleet, that is actual and important. For the treatment of special cases, both medical and surgical; the removal of all infectious diseases from the ships of the fleet; for consultation, access to every instrument and device for accurate diagnosis and treatment; a corps of specialists; as a supply ship; for emergency needs and as a medical base for possible expeditions—for all these and many other uses the hospital ship has been demonstrated to be an important and useful factor in the fleet, supplying the place and giving all the support that could be had from the best of our metropolitan hospitals, with the advantage of being able to move with the fleet. The influence for good of such a ship is constantly increasing and her usefulness has by no means reached its limit.

It is suggested that a paymaster be added to the complement of the officers on the hospital ship, as the present system of keeping the patients' accounts on their own ships and those of the hospital corpsmen on the flagship is a very complicated one, especially when the hospital ship has service separated from the flagship, as frequently occurs. This paymaster could also act as commissary officer.

During the early days of the occupation of Vera Cruz, when her presence there was most urgently needed, the *Solace* was forced to return north for necessary repairs to her machinery, leaving the fleet and the forces on shore without the hospital facilities which that vessel provides. This occurrence, while it had no serious results in this particular instance, illustrates the possibility of the fleet being deprived of the services of the hospital ship when of most importance, and justifies the strong recommendation that a second hospital ship be provided for the Atlantic Fleet. Also, the fleet is frequently separated, and, as one hospital ship can accompany but one portion of the fleet, the other must necessarily do without its services.

While the Pacific Fleet was in Mexican waters it had no proper hospital facilities and the need of a hospital ship in that fleet was great. It was necessary to send many patients north on colliers, which usually carry no medical officers, and, because of the shortage in the Medical Corps, it was not possible even to furnish a medical officer for every collier, though one was detailed especially for this purpose. A hospital ship for each fleet is a necessity.

For several years the bureau has been perfecting plans for rapid transformation of a merchant ship into a hospital ship, and a particular ship was selected for the purpose. The Vera Cruz situation demonstrated the weaknesses of such plans. When the ship was needed, it was sought also by the War Department and also by the Bureau of Supplies and Accounts of the Navy; authorization for its purchase and adaptation to hospital needs was delayed from day to day until finally the crisis was over. Had it been authorized, it would have taken at least six weeks to alter and equip the ship. In any war the Navy's work must be done early and quickly, and the need for hospital ships will be immediate; a delay of six weeks or even much less may see the passing of the period of greatest usefulness of such a ship—the period when her presence will be of greatest value and her absence will cause the greatest suffering. The conclusion is inevitable that the only way to have hospital ships in an emergency is to provide them in advance.

ENGINE ROOM CONDITIONS.—It is noted that on those ships where the experiment of closing in the engine room hatches and providing powerful exhaust blowers at the top of the engine room in addition to the powerful supply blowers at the bottom of the engine room has been tried it has proved to be a great success, and the engine room conditions on such ships are ideal, the temperature seldom going above 90° in moderate climates and often lower. The only drawback is the fact that if anything were to interfere with the system of ventilation—if a blower should become disabled either in ordinary use or, more important, in time of battle—the situation in the engine room would be unbearable. The solution of the engine room conditions seems to have been reached, the only question being whether we can always depend on uninterrupted power to the electric motors.

GENERAL PHYSICAL CONDITION OF THE PERSONNEL.—The general physical condition of the personnel is good. When it is considered that the average age is 22 years, it is not surprising that many men appear slender and immature. However, a short period in the service changes this condition and the men rapidly fill out and present a good musculature with healthy and progressive development. Groups of men have been selected from time to time at random and examination, stripped, has in most cases shown an unexpected and satisfactory physique.

Observation and reports seem to indicate that the Swedish system of physical training is the best factor in the physical development of the personnel that has been tried in the service. Daily observations, where this system is constantly in use and carefully carried out, as on the *Wyoming*, have been most satisfactory, and as the system becomes better known and is more intelligently used, it is believed that it will be the factor productive of most good to the physical well-being of the men. It has been suggested that the Swedish system, being taught at the Naval Academy, should be continued as a daily routine drill for these younger officers, most of whom now lead their divisions in the actual performance of the drill, thus setting an example to the men and assuring interest and zeal in carrying out the selected exercises.

It has been suggested that this daily drill would fulfill most systematically and fully the objects aimed at in the present requirements for the monthly physical exercise of officers, and could replace it up to perhaps the age of 40 years, after which time the physical exercise of officers over 40 should be determined by the board of medical officers making the yearly examinations, and should be prescribed for these older officers as their yearly examination may show their need. It would systematize and carry out in a rational manner the efforts that are being made at the present time to stimulate physical well-being, and its adoption is worthy of serious consideration.

SCREENING.—Ships visiting tropical waters should be thoroughly screened. This was demonstrated by the ships in Mexican waters, several ships having many cases of very severe malaria, while well-screened ships under the same conditions had none. A board has selected uniform types of nets for cots and head nets for issue to ships and expeditionary forces.

SANITARY MEASURES AND CONDITIONS ASHORE.

NAVAL ACADEMY, ANNAPOLIS, MD.—Preventible diseases have been almost entirely excluded from the brigade of midshipmen. This is due in large measure to the clean milk, pure water, and good food with which they are provided. By the score-card system the dairy was rated at 97.63 per cent of a possible 100. The medical officer in charge of family practice cared for 7,108 house visits and 3,810 office consultations during the year 1913.

NAVAL TRAINING STATION, GREAT LAKES, ILL.—The hospital at this station was reopened during the year, as the sick quarters proved insufficient for the number of patients.

NAVAL STATION, GUAM.—The general health at this station has been very good. The native population on December 31, 1913, was 12,501; during the year there were 590 births and 339 deaths. The improvement of the health of the natives was due to (1) establishment of waterworks and public latrines and showers in the smaller towns; (2) efficient street cleaning and disposal of refuse; (3) the course in general and personal hygiene given in the public schools; (4) reduction of the mortality of infants and children by education of midwives and instruction of parents, and treatment of intestinal parasitic infections of school children; (5) segregation of lepers and insane; (6) compulsory treatment of all cases of gangosa; (7) strict quarantine of passengers arriving in Guam.

NAVAL STATION, GUANTANAMO, CUBA.—The new station was completed and occupied in November, 1913. Hygienic conditions at this station are excellent. If this station is to become a permanent base, the most vital problem will be the selection of an adequate and permanent water supply. A consideration of the question resolves itself into the possibilities of (1) finding water on the reservation by artesian or other wells; (2) bringing water from outside the reservation from the streams and springs in the mountains, which would be attended with great expense and give a doubtful supply; (3) bringing water from the Guantanamo River, which seems to be the most feasible, least expensive, and amply adequate.

However, the senior medical officer of the station gives three reasons why water from that source should not be used for drinking purposes: (a) It is a sluggish stream whose entire source is surface drainage; (b) the watershed is inhabited and also used as a stock range; the number of people living on the watershed is increasing and will continue to do so in the future; (c) the watershed will be entirely outside of the reservation and will not be under our control. A large part of the present water supply is secured from the city of Guantanamo and this water is considered to be absolutely pure, coming out of a cave in an uninhabited mountain.

The following extract from the sanitary report of the senior medical officer of the station is worthy of notice: "In my opinion the securing of an adequate and proper water supply for this station which can be maintained in time of war is an impossibility."

A distilling plant with a capacity of 25,000 gallons has been put in operation at the new station.

Yellow fever was brought to Guantanamo on a merchant ship in July, 1913. A strict quarantine was established and efforts made to prevent infection by mosquitoes. No further cases occurred.

NAVY YARD, PHILADELPHIA, PA.—The sanitary condition of that part of the city of Philadelphia adjacent to the navy yard has been mentioned in several previous reports and still continues to be a menace to the health of the yard and the ships.

NAVAL STATION, SAMOA.—The native population on December 31, 1913, was 7,426. Treatment at the Samoan hospital was put on a free basis November 1, 1913, and every inducement is offered the natives to avail themselves of the free treatment. During the year 427 cases were admitted to the hospital.

NAVAL DISPENSARY, WASHINGTON.—The medical officers attached to this dispensary attended to 7,191 office calls and 3,279 house calls during the fiscal year 1914. The dentist attached to the dispensary treated 325 individuals, and there were 12,877 prescriptions filled during the same period. The satisfactory manner in which this enormous amount of work has been performed reflects credit upon the officers and hospital corpsmen on duty at the dispensary.

NAVAL HOSPITAL, LAS ANIMAS, COLO.—The number of patients treated at this hospital during 1913 was 367. As already stated, this bureau believes that a combined tuberculosis hospital for the Army, the Navy, and the Public Health Service could do the work now done by the sanatoria of the three services more efficiently and with a very great saving in the cost of operation.

NAVAL HOSPITAL, MARE ISLAND, CAL.—To relieve the crowded condition of this hospital and to anticipate the increased accommodations necessitated by the presence of the United States and foreign navies at the time of the Panama-Pacific International Exposition, authority was sought for construction of a temporary building, and this authority has been granted. Plans are now being prepared by the Bureau of Yards and Docks.

NAVAL HOSPITAL, PUGET SOUND, WASH.—Authority has been granted for construction of a temporary building to relieve the present overcrowded condition of this hospital and to provide additional facilities in anticipation of the increased work when the United States and foreign fleets visit the west coast at the time of the Panama-Pacific International Exposition.

SANITARY CONDITIONS AND MEASURES IN GENERAL.

RECREATION AND LIBERTY.—The beneficial effect of contentment on general health, and especially its effect both in preventing and in hastening recovery from, the minor ailments has been observed since the earliest days of the Navy. Liberality in granting liberty and the encouragement of healthful sports and recreations have helped in the continued improvement of health.

Of the recent developments of this idea the following are worthy of mention: In Samoa an enlisted men's club has been organized, and the medical officer states that its value can not be overestimated. It affords various means of amusement, such as magazines and newspapers, player piano, Victrola, pool tables, and bowling alleys. In the Atlantic Reserve Fleet a compartment on the *Mississippi* was set aside for recreation purposes and this was a subject of commendation by the medical officer because of its good effect in increasing contentment and improving the morale. The fleet surgeon of the

Pacific Fleet states that the wise rotation of swimming, boating, fishing, and camping parties for the men, frequent moving-picture shows, minstrel and vaudeville entertainments and competitive athletics of many sorts have contributed more than anything else to promote contentment and the mental and moral health of the crews, which underlie the excellent physical health existing generally throughout the fleet.

The unfavorable effect of deprivation of liberty is shown by the reports from ships whose presence in Mexican waters for prolonged periods was required at a time when it was not feasible to grant liberty.

The number of cases of boils and petty illnesses was increased and convalescence from more serious illness was prolonged. Since the practice of granting liberty has been resumed, those conditions are reported to be greatly improved.

EDUCATION.—As a part of the department's policy of systematic education of the enlisted personnel, the bureau has prepared a text book, the "Handy Book for the Hospital Corps." In this book the following subjects are treated in detail: Anatomy and physiology, first aid, emergency surgery, bandaging, field hygiene and sanitation, the march, hygiene and sanitation, personal hygiene, air and ventilation, prevention of disease, pharmacy, medicines and medicinal agents of the supply table, chemistry, naval hospitals, hospital duties and ward management, nursing, the operating room and surgical technique, and clerical duties. This book affords a valuable means for systematizing Hospital Corps instruction and will result in more satisfactory education of that corps.

PHYSICAL TRAINING.—The modified Swedish system which is being gradually introduced into the service has been the subject of much commendatory notice. This system aims to develop quickness and efficiency of the mind as well as of the body.

EXPEDITIONARY FORCES.—The recent maneuvers of the Advanced Base Brigade at Culebra, West Indies, afforded an unusual opportunity for the drill and observation of the Medical Department with landing forces and also to demonstrate the good and bad features of equipment for the same, including the new brigade medical outfit. The work of this brigade was an excellent preliminary training for the operations at Vera Cruz which found the brigade ready organized, equipped, and trained for its duties ashore.

OPERATIONS AT VERA CRUZ.—On April 21, 1914, the occupation of Vera Cruz was begun. The following medical officers landed on this day: Brigade surgeon, Surg. M. S. Elliott; regimental surgeons, Surg. Jacob Stepp, Passed Asst. Surgs. H. L. Kelley and J. B. Pollard, of the Second Regiment of Marines; Passed Asst. Surg. R. J. Straeten, battalion surgeon, U. S. S. *Florida*; Asst Surg. W. E. Eaton, battalion surgeon, U. S. S. *Utah*.

A field hospital was located in a frame building at Pier No. 4 in command of Surg. Jacob Stepp, with Passed Asst. Surgs. Kelley and Pollard as assistants. Passed Asst. Surg. R. J. Straeten accompanied the *Florida* battalion.

The ambulance party was divided so as to render aid to the different companies, and concerning their behavior the division surgeon

makes the following statement: "The Hospital Corps and stretcher bearers of the ambulance party should be highly commended for their strict attention to duty and behavior under heavy fire. In the hottest skirmishes of the first day's firing, the wounded were attended to without the slightest delay and without a thought of the personal danger encountered in leaving cover."

Nineteen wounded were sent aboard the U. S. S. *Prairie* this day and were there attended by Passed Asst. Surg. Harry Shaw, United States Navy, with the able assistance of Fleet Surg. Pope, of H. M. S. *Essex*, the surgeon of the Spanish cruiser *Carlos V*, and Surg. J. M. Brister, of the *Utah*.

Twenty-two wounded and four dead were received at the field hospital on the 21st. During the day the hospital was under fire practically all the time, and several bullets went through the building.

The *San Francisco* battalion landed early in the morning of the 22d, and Passed Asst. Surg. T. W. Reed, with an ambulance party, established an aid station in a warehouse near the water front. The wounded received at this station, including three Mexicans, were promptly sent off to the *Solace*.

The *Arkansas* battalion landed at 3 a. m. on the 22d, with Passed Asst. Surg. S. L. Higgins and an ambulance party. This ambulance party did excellent work, and the members of it were frequently under fire.

The ambulance party of the *Utah's* battalion, under the direction of Asst. Surg. W. E. Eaton, performed their duty most creditably. These men were under fire during the entire afternoon of April 21, both in an exposed position at the place of landing, and on the firing line.

The Second Regiment of the Naval Brigade landed at 3.45 a. m. on the 22d. The medical officers of this regiment were: Regimental surgeon, Surg. C. D. Langhorne; battalion surgeons, Asst. Surgs. J. T. Borden and C. C. Wilson. There were 12 hospital corpsmen and a number of stretcher bearers. Surg. Langhorne, in his report, calls attention to the excellent work done by the hospital corpsmen. The casualties were as follows: April 21, killed, 4; wounded, 2; April 22, killed 13, wounded 41; total killed, 17; total wounded, 63.

During the remainder of the occupation the various medical officers and their detachments were occupied in looking out for their own men and organizing sanitary services.

The field station in the Terminal Hotel was kept in commission until the 25th. In addition to the regular detail, the following medical officers were on duty at this place: Surg. D. N. Carpenter, Surg. A. Stuart, Passed Asst. Surg. P. R. Stalnaker.

On April 23 an inspection was made of the city's four hospitals to determine their condition and availability for use. San Sebastian Hospital was placed under the charge of Surg. D. N. Carpenter, who had as assistants Passed Asst. Surgs. Kelley and Higgins.

Throughout all the reports from medical officers comments are frequently made on the manner in which the members of the Hospital Corps performed their duties. Undoubtedly many lives were saved by their unremitting labors while exposed to the enemy's fire.

For a year or more the necessity of landing forces on Mexican territory had appeared to be imminent enough to justify the formu-

lation of complete plans for such a landing. The fleet surgeon of the Atlantic Fleet, with his assistants, had carefully worked out, in every detail, the equipment of the landing forces, the organization of the Medical and Hospital Corps, and the sanitary organization to take charge of the public health and sanitation of whatever cities might be occupied. The advance preparation of these plans greatly aided the smoothness of operation which characterized the entire maneuvers. The work of this brigade was an excellent preliminary training for the operations at Vera Cruz, which found the brigade ready organized, equipped, and trained for its duties ashore.

The sick and wounded who it was considered would not be available for duty within a very short time were transferred on the hospital ship *Solace* to the Naval Hospital, New York. These patients, as well as their friends and relatives, joined in praise and appreciation of the comfort and the complete facilities afforded both by the *Solace* and the Naval Hospital, New York. Not a single complaint has been heard of the conduct or treatment provided by any member of the Medical Corps or Hospital Corps.

After the arrival of the Army at Vera Cruz the bluejackets returned to the ships, while the marines remained with the Army on shore. Diarrhea and dysentery appeared among the men on shore, and, for a time, threatened to become a serious problem, but these diseases were probably fly-borne, and by sanitary measures, such as care and removal of kitchen waste, screening of kitchens, mess halls, and patients sick with these diseases, they have been practically eliminated. Malaria appeared when the rainy season came on, and a number of cases occurred, as it was impossible to protect by screens those men on outpost duty and those who were moving from place to place. The sick list, which was 3.18 per cent for the week ending June 3, has gradually decreased, and was only 1.90 per cent on August 25. This very creditable showing is the result of the careful observation of sanitary principles, and is a source of gratification to the whole Medical Department.

These activities at Vera Cruz taxed to the limit both the supplies and the personnel of the Medical Department. The stock of the medical supply depot at Brooklyn was entirely depleted in certain necessities, and had the action been prolonged or of a greater scope it would have been necessary either to accept contributions of such supplies from the Red Cross, or similar organizations, or to purchase them in large quantities in the open market at a considerably advanced price.

The shortage in the Medical Corps and in the Hospital Corps caused considerable embarrassment, as a large number of ships were put in full commission that formerly had required no members of these corps. Fortunately, the bureau was able, by calling upon acting assistant surgeons and members of the Medical Reserve Corps, and by reducing the complements of the shore establishments below the normal standard, to supply all demands for additional personnel.

The presence in the bureau of medical officers whose personality and experience particularly fitted them to solve the problems of equipment and personnel was invaluable, and these officers are deserving of great praise for the manner in which the unusual duties devolving upon the bureau were performed.

PERSONNEL.

MEDICAL CORPS.—During the year ending June 30, 1914, 28 medical officers were admitted to the corps and 10 officers were lost by death, retirement, or resignation, making the total strength of the corps 311. The vacancies now number 36. The last year stands in contrast to other years in that for the first time in three years the number taken into the corps was in excess of the number lost by death, resignation, or retirement. This increase was due to a change in the method of taking medical officers into the corps. Candidates were formerly appointed directly to the Medical Corps from civil life. A candidate is now first given a preliminary examination for appointment as assistant surgeon in the Medical Reserve Corps, and, after taking the course at the Naval Medical School, comes up for final examination, and should he successfully pass this examination is appointed an assistant surgeon in the Medical Corps. Out of the 75 men who received permits for the preliminary examination 23 were rejected physically. Of those who continued the examination 12 failed professionally and 5 withdrew before its conclusion. The total number passing was 35. These men were graduates of 25 different medical schools, and most of them were hospital men. Twenty-eight men successfully passed the final examination, and 27 of these have been commissioned. The year just passed has been marked by greater activity on the part of the Medical Corps than previous years. By July, 1914, there were 42 more medical officers at sea than in July, 1913. The large number of ships in commission, five regiments of marines equipped for expeditionary work, and the demand for medical officers on the foreign stations and with legations abroad, have resulted in a situation wherein the number of medical officers at sea is in excess of the number employed at the naval hospitals, navy yards and stations, the recruiting stations, and the various other activities on shore.

SPECIAL DETAILS.—The following officers have been engaged in special duties, aside from the usual activities of the Medical Department: Passed Asst. Surg. P. E. Garrison, with the Pellagra Commission and as lecturer in the Harvard Medical School; Passed Asst. Surg. G. B. Crow, as instructor in tropical medicine in the New York Postgraduate Medical School; Passed Asst. Surg. J. O. Downey, with the Alaskan Coal Investigating Commission; Passed Asst. Surg. E. W. Brown, with a board for investigating the air of submarines; Asst. Surg. G. R. W. French, with a board for investigating the conditions of deep diving.

The present size of the corps is entirely inadequate for the service requirements, and should be increased to at least 450 for a peace-time basis.

MEDICAL RESERVE CORPS.—During the year the services of officers of the Medical Reserve Corps have been utilized at the recruiting stations and on board several ships. Valuable assistance in certain specialties has been rendered by members of this corps at naval hospitals. This service has been entirely without pecuniary reward and with no purpose other than a patriotic desire to aid in the well-being of the country's protectors. A prominent surgeon of Washington, D. C., a member of this corps, volunteered for active duty, and was sent to Vera Cruz, where his services were highly valued.

DENTAL CORPS.—There are at present 13 vacancies in the Dental Corps. A number of candidates have applied for the examination, and it is expected that when the next examination is held most of these vacancies will be filled. Most of the large stations are equipped with a dental outfit, and an officer of the Dental Corps is assigned to the station for duty. As soon as additional officers are obtained they will be ordered to certain ships in the fleet, where it is hoped their services may be utilized to great advantage.

HOSPITAL CORPS.—The Hospital Corps, on June 30, 1914, consisted of 24 chief pharmacists and pharmacists, 285 hospital stewards, 563 hospital apprentices first class, and 565 hospital apprentices, a total of 1,437.

The above number of men has been inadequate properly to man the hospitals, ships, stations, and expeditionary forces of the service, and the hospitals are sadly in need of more hospital corpsmen properly to care for the sick and disabled men of the service. The large number of ships in commission, together with five regiments of marines in the field, has made it necessary to strip all of the hospitals and shore stations in the service to a complement much below that which is necessary to perform the ever-increasing work at these places.

A Hospital Corps training school has been established at the Naval Training Station, Newport, R. I., with facilities for teaching newly enlisted hospital apprentices. Instruction is given in the following subjects: Anatomy, physiology, minor surgery, hygiene and sanitation, clerical work, chemistry, materia medica and pharmacy. There are at present about 80 men under instruction. It is hoped that a similar school may be inaugurated for the training of hospital corpsmen on the west coast in the near future. A "Handy Book for the Hospital Corps" has been prepared in the bureau, with particular view to the special needs of the naval service, and is being used by the hospital corpsmen under instruction, as well as those throughout the service.

When the recent legislation providing for the grade of chief pharmacist was enacted, the bureau anticipated that the unsatisfactory conditions due to the lack of men of this grade would be alleviated. But an opinion of the Judge Advocate General to the effect that such legislation did not contemplate any increase in the corps, but only the establishment of a higher grade, has nullified the act so far as the bureau's purposes are concerned. At least 50 pharmacists and chief pharmacists are required properly to carry out the work and safeguard the property of the Government.

Reenlistments in the rating of hospital apprentice first class are much lower than is desirable, and as these men do the larger proportion of the trained work, they should have more inducement toward reenlistment. It is believed that, with ratings and grades of pay similar to those of the deck force of the Navy, many of these experienced young men would return to the service instead of seeking employment in civil life after having received the benefit of the Navy's education and training. I therefore believe it to be one of my most important duties to urge that such legislation be enacted as will entitle hospital corpsmen to the increase in the number of ratings, with the accompanying pay enjoyed by other branches of the service, thereby increasing the efficiency and contentment of this corps.

NURSE CORPS.—During the year 43 nurses have been appointed and 38 have left the corps. Additional nurses have been sent to Guam, in order to provide for an increase in the class of native women undergoing instruction in nursing at the hospital of that station. The course of instruction for this class has been extended to include the care of tubercular patients and massage, nurses especially trained in each branch being provided. The progress of the native nurses in this work is gratifying. The training school for native women in Samoa, mention of the establishment of which was made in last year's report, is progressing satisfactorily, and the four women now in training have made such advancement as to justify the undertaking.

In general, the Medical Department of the Navy seems to be efficient and prepared to meet all present peace-time demands. No new construction is contemplated at present, except as unusual conditions may demand at special points, but every effort will be made to preserve and improve the existing equipment for this important work of the Navy.

W. C. BRAISTED.

STATISTICS.

TABLE 1.—*Detailed statement of disease and injury.*

(a) This table gives an alphabetical list of diseases and injuries, showing the method of admitting and disposing of all cases of the force afloat (F. A.), at stations and yards (S. and Y.), at U. S. naval hospitals (H.), totals (T.) for the entire service, and a summary with comparative data for 10 previous years.

(b) The class number (roman numerals) refers to the classification of the Navy nomenclature as follows:

- I. Diseases of blood.
- II. Diseases of circulatory system.
- III. Diseases of digestive system.
- IV. Diseases of ductless glands and spleen.
- V. Diseases of ear.
- VI. Diseases of eye and annexe.
- VII. Diseases of genito-urinary system (nonvenereal).
- VIII. Diseases of infective type (nonvenereal).
- IX. Diseases of infective type (venereal).
- X. Diseases of lymphatic system.
- XI. Diseases of mind.
- XII. Diseases of motor system.
- XIII. Diseases of nervous system.
- XIV. Diseases of respiratory system.
- XV. Diseases of skin, hair, and nails.
- XVI. Herniæ.
- XVII. Miscellaneous diseases and conditions.
- XVIII. Parasites (fungi and certain animal parasites).
- XIX. Tumors.
- XX. Injuries (wounds, etc.).
- XXI. Poisons.

(c) The international number refers to the classification of diseases and injuries prepared by the International Commission (Paris, July 1 to 3, 1909).

(d) In the case of wounds, etc., and poisons, key letters immediately following the title (e. g., Abrasion, unqualified "G") are given for classification of the cause of such injury, and are interpreted as follows:

- A. Suicidal.
- B. Homocidal.
- C. Conflagration. Includes all injuries incident to general conflagration. Burns otherwise received are not classed hereunder.
- D. Accidental drowning or submersion.
- E. Traumatism by firearms, accidental. To include all injuries caused by the projectile, the blast from great guns, or from the piece when fired.
- F. Traumatism by explosion. To include powder, gas, compressed air, or steam explosions; also the explosion of a gun.
- G. Traumatism by fall.
- H. Traumatism by machines.
- I. Traumatism by other crushing.
- J. Traumatism due to athletic sports.
- K. Casualty in action.
- L. Traumatism due to other external violence not classified above.

TABLE 2.—*Table of diseases and injuries among occupational groups.*

This table shows the average complement in each group according to occupation, the number of admissions, deaths, invalided from service, sick days, and damage for each class of disability, together with a total of admissions, deaths, suicides, invalided from service, sick days, damage, and the rates per 1,000 for each occupational group.

NOTE.—As the above two tables comprise the entire service regardless of place or character of disability, to compare it with the statistics for previous years the items under the hospital for tuberculosis and hospitals for the insane must be added to the figures given for such previous year, as the figures for these institutions were not included in totals for the service in previous years.

I. DISEASES AND INJURIES.

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913.

[F. A., force afloat; S. and Y., stations and yards; H., Hospitals and hospital ships; T., totals.]

Diagnosis.	Place.	Taken up as—			Disposition.								Continued to next year.	Total number of sick days.		
		Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Deserted.	Died.	Invalided from serv-ice.	Hospital (naval).	Hospital for Insane.	Hospital for tuber-culosis.			Sick leave.	Transferred.
Abscess about rectum (Class III, Inter. 110B).....	F. A.	2	56	7	40	2					19			2	2	356
	S. and Y.		19	3	8						14					101
	H.	3	6	37	32	9								1	4	1,625
	T.	5	81	47	80	11					33			3	6	2,082
Abscess about urethra (Class VII, Inter. 125).....	F. A.		8	2	7						2			1		109
	S. and Y.		2		2											82
	H.		1	2	2	1										123
	T.		11	4	11	1					2			1		314
Abscess, entamoebic, liver (Class XVIII, Inter. 115).....	H.		2	2				1						2	1	263
Abscess of axilla (Class X, Inter. 84).....	F. A.		34	5	34						2			2	1	273
	S. and Y.	1	16	1	10						7				1	123
	H.		3	10	11									1	1	306
	T.	1	53	16	55						9			3	3	707
Abscess of brain (Class XIII, Inter. 60).....	H.		1					1								0
Abscess of Cowper's gland (Class VII, Inter. 127).....	F. A.		1		1											7
	S. and Y.		1		1											6
	H.															
	T.		2		2											13

Abcess of eye and annera (Class VI, Inter. 76C).....	F. A. H.....	1	4	2	2	2	1	2	2	24 60
	T.....	1	4	2	4	4	1	2	84	
Abcess of kidney (Class VII, Inter. 122).....	F. A. S. and Y. H.....	1	2	2	1	1	.....	1	2	.....	108 403
	T.....	1	3	4	3	1	.....	1	2	.....	659
Abcess of kidney, perinephritic(Class VII Inter. 122).	F. A. S. and Y. H.....	1	3	1	.....	1	.....	.....	2	.....	66 10 1
	T.....	1	4	5	4	3	.....	1	1	.....	481
Abcess of larynx (Class XIV, Inter. 87).....	T.....	8	6	4	4	3	1	2	557
	F. A. H.....	.....	2	2	1	.....	2	.....	1	.....	15 18
	T.....	.....	2	2	1	2	.....	.....	1	.....	33
Abcess of lung (Class XIV, Inter. 98).....	H.....	.....	1	.....	.....	.....	1	.....	.....	.....	6
Abcess of lymph-node (Class X, Inter. 84).....	F. A. S. and Y. H.....	1	14	1	13	.....	.....	.....	2	.....	174 157
	T.....	1	2	4	3	3	.....	.....	2	.....	387
Abcess of nasal septum (Class XIV, Inter. 86).....	F. A. H.....	.....	3	1	2	.....	.....	.....	2	.....	10 62
	T.....	.....	4	3	3	2	.....	.....	2	.....	72
Abcess of omentum (Class III, Inter. 117).....	F. A. H.....	.....	1	3	.....	3	.....	.....	1	.....	0 144
	T.....	.....	1	3	.....	3	.....	.....	1	.....	144
Abcess of pharynx (Class III, Inter. 100).....	F. A. S. and Y. H.....	.....	2	2	2	.....	.....	.....	.....	.....	28
	T.....	.....	4	.....	4	.....	.....	.....	.....	.....	27
Abcess of prostate gland (Class VII, Inter. 126).....	F. A. H.....	.....	1	.....	1	.....	.....	.....	1	.....	1 70
	T.....	.....	1	1	1	.....	.....	.....	1	.....	71

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Dsd.	DD.	IS.	H.	HI.	HT.	L.	T.			
Abscess of salivary gland (Class III, Inter. 99B)	F. A.	.....	3	.....	1	.....	.....	.....	.....	2	.....	.....	.....	.....	15	.....	15
	S. and Y.	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	0	.....	0
	H.	2	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	84	2	84
	T.	2	4	3	4	.....	.....	.....	.....	3	.....	.....	.....	.....	99	2	99
Abscess of scrotum (Class VII, Inter. 127)	F. A.	.....	7	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	27	.....	27
	S. and Y.	.....	3	.....	2	.....	.....	.....	.....	2	.....	.....	.....	.....	40	.....	40
	H.	1	1	2	3	1	.....	.....	.....	.....	.....	.....	.....	.....	77	.....	77
	T.	1	11	3	11	1	.....	.....	.....	2	.....	.....	.....	.....	144	.....	144
Abscess, unqualified (Class VIII, Inter. 144)	F. A.	2	557	10	524	4	.....	.....	.....	37	.....	.....	.....	.....	4,041	2	4,041
	S. and Y.	.....	166	11	123	1	.....	.....	1	51	.....	.....	.....	.....	940	1	940
	H.	15	29	94	103	21	.....	1	.....	.....	.....	.....	.....	.....	3,831	8	3,831
	T.	17	753	115	750	26	.....	1	1	88	.....	.....	.....	.....	8,842	11	8,842
Acne (Class XV, Inter. 145C)	F. A.	.....	9	2	2	.....	.....	.....	.....	8	.....	.....	.....	.....	47	.....	47
	S. and Y.	.....	7	1	.....	.....	.....	.....	1	7	.....	.....	.....	.....	55	.....	55
	H.	.....	1	16	10	1	.....	.....	.....	.....	.....	.....	.....	.....	416	6	416
	T.	.....	17	19	12	1	.....	.....	1	15	.....	.....	.....	.....	548	1	548
Adenoids (Class XIV, Inter. 86)	F. A.	.....	3	.....	1	.....	.....	.....	.....	2	.....	.....	.....	.....	3	.....	3
	S. and Y.	.....	3	.....	.....	.....	.....	.....	1	2	.....	.....	.....	.....	32	.....	32
	H.	.....	4	4	5	3	.....	.....	.....	.....	.....	.....	.....	.....	130	.....	130
	T.	.....	10	4	6	3	.....	.....	1	4	.....	.....	.....	.....	165	.....	165
Adenoma (Class XIX, Inter. 46)	F. A.	.....	8	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	0	.....	0
	S. and Y.	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	.....	8
	H.	.....	.....	3	2	1	.....	.....	.....	.....	.....	.....	.....	.....	86	.....	86
	T.	.....	4	3	3	1	.....	.....	.....	3	.....	.....	.....	.....	97	.....	97
Adhesions about gall bladder (Class III, Inter. 115)	F. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	H.	.....	.....	2	1	1	.....	.....	.....	.....	.....	.....	.....	.....	43	.....	43

[illegible]

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place. •	Taken up as—					Disposition.							Cont.	Days.
		Rem.	A.	RA.	D.	C.	Desd.	DD.	IS.	H.	HL.	HT.	L.	T.	
Aneurism (Class II, Inter. 81).	F. A.	1	1	1						1					0
	S. and Y.	1	1	2						1					0
	H.	1	1	2		1			1						68
	T.	1	3	2		1			1	2					68
Angina pectoris (Class II, Inter. 80).	F. A.	1	1							1					5
	S. and Y.	1	1							1					0
	H.			2	2										56
	T.		2	2	2					2					61
Angioma (Class XIX, Inter. 46).	H.	1													5
														1	
Angioepaetic edema (Class XIII, Inter. 74).	F. A.	1	1	2						3					79
	S. and Y.	1	1	5						1					0
	H.			3	3	2									114
	T.		2	7	3	2				4					103
Ankylosis of joint (Class XII, Inter. 76).	F. A.		5	7	1					2				1	68
	S. and Y.		10	3						7					74
	H.	1	7	12	3	2				6				14	424
	T.	1	22	22	4	2			15	8				15	566
Anti-inoculation, unqualified (Class XVII, Inter. 159A).	F. A.	2	2		2										5
	S. and Y.	25	25	2	23					2					39
	H.			2	1	1									26
	T.		27	2	26	1				2					70
Aphasia (Class XIII, Inter. 74).	F. A.			1						1					0
	S. and Y.	1			1										222
	H.			1											40
	T.	1		2	1					1					262

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—			Disposition.										Cont.	Days.
		Rem.	A.	RA.	D.	C.	Dsd.	DD.	IS.	H.	HI.	HT.	L.	T.		
Ascariasis (Class VI, Inter. 76C).....	F. A.	20	11	6	.....	.....	.....	.....	11	23	.....	.....	1	.....	.....	158
	S. and Y.	3	8	7	.....	.....	.....	.....	1	2	.....	.....	.....	.....	.....	51
	H.	2	5	28	17	2	.....	.....	.....	.....	.....	.....	.....	11	3	1,128
T.	T.	2	38	45	30	3	.....	.....	12	25	.....	.....	1	11	3	1,337
	F. A. ....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
	H. ....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Atrophy of liver, acute yellow (Class III, Inter. 111).....	F. A. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	S. and Y.	4	1	1	1	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	19
	H.	1	.....	6	.....	3	.....	.....	.....	1	.....	.....	.....	.....	3	0
Atrophy of muscle (Class XII, Inter. 149).....	T. ....	.....	5	7	1	3	.....	.....	.....	5	.....	.....	.....	.....	3	318
	H. ....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	H. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Atrophy of optic nerve (Class VI, Inter. 76C).....	F. A. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	S. and Y. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	H. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Atrophy of testicle (Class VII, Inter. 127).....	T. ....	.....	3	1	2	.....	.....	.....	1	1	.....	.....	.....	.....	.....	41
	F. A. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	S. and Y. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Autointoxication, intestinal (Class III, Inter. 110B).....	F. A. ....	.....	10	.....	7	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	28
	S. and Y. ....	.....	3	.....	2	.....	.....	.....	1	1	.....	.....	.....	.....	.....	6
	H. ....	.....	5	7	8	2	.....	.....	.....	.....	.....	.....	.....	.....	2	262
Balanoposthitis (Class VII, Inter. 127).....	T. ....	.....	18	7	17	2	.....	.....	.....	4	.....	.....	.....	.....	2	206
	F. A. ....	.....	8	1	8	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
	S. and Y. ....	.....	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Blenorrhoea (Class VI, Inter. 76C).....	T. ....	.....	13	1	13	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	132
	F. A. ....	.....	3	.....	1	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	1
	S. and Y. ....	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bronchiectasis (Class XIV, Inter. 90).....	H. ....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	T. ....	.....	6	2	5	.....	.....	.....	.....	2	.....	.....	.....	.....	1	73
	H. ....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	147

[illegible]

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—					Disposition.								Cont.	Days.
		Rem.	A.	RA.	D.	C.	Dsd.	DD.	IS.	H.	HI.	HT.	L.	T.		
Carcinoma (Class XIX, Inter. 39-45)	F. A.	1	1	1						2						8
	S. and Y.	1	1	3				1						2		36
	H.	1	2			2		2								87
	T.	1	4	4		2		3		2				2		131
Cardiospasm (Class III, Inter. 103)	F. A.	1	1	1						1					1	0
	S. and Y.															4
	H.		1	1						1					1	4
	T.		1	1												4
Caries of esicle (Class V, Inter. 76)	H.	1			1											8
	F. A.	4			1					3						1
	S. and Y.	4	4	4	4											10
	H.	2	2	4	5	1										227
Cataract (Class VI, Inter. 76C)	T.		10	4	10	1				3						238
	F. A.	1	1	1					1	1						1
	S. and Y.	1	1	3	1	1				1				1	1	0
	H.	1														304
Cellulitis (Class VIII, Inter. 144)	T.	1	2	4	1	1			1	2				1	1	305
	F. A.	4	214	11	208			1								1,803
	S. and Y.	3	51	2	45	1				21				1		604
	H.	4	12	32	39	4				9				1	4	1,254
Cerebrospinal fever (Class VIII, Inter. 61a)	T.	11	277	45	290	5		1		30				3	4	3,561
	F. A.		5	2				2	1	3				1		183
	S. and Y.		4	4				1	1	3						10
	H.	1		6		2		3						2		304
Cerumen, accumulation of (Class V, Inter. 76)	T.	1	9	9		2		6	2	6				3		467
	S. and Y.		1		1											0

[illegible]

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	RA.	D.	C.	Ded.	DD.	IS.	H.	HI.	HT.	L.	T.			
Cholelithiasis (Class III, Inter. 114).....	F. A.		7	3	3												24
	S. and Y.		2	1						7							3
	H.	1	1	14	9	4				3				1	2		716
	T.	1	10	18	12	4				10				1	2		743
Cholera, Asiatic (Class VIII, Inter. 12).....	H.		1		1												86
	F. A.		1							1							4
	H.			1	1												134
	T.		1	1	1					1							138
Chorea (Class XIII, Inter. 72).....	F. A.		2							2							0
	S. and Y.	1	2	2	1				3	1				2	1		14
	H.			3	1												168
	T.	1	4	5	1				3	3				2	1		172
Choroiditis (Class VI, Inter. 75C).....	F. A.		2	1					1	2							1
	S. and Y.		1		1												2
	H.	1	2	4	2	1			1					3			383
	T.	1	5	5	3	1			2	2				3			386
Chylous ascites, nonlarial (Class III, Inter. 84).....	S. and Y.		1							1							1
	H.			1		1											7
	T.		1	1		1				1							8
	F. A.		5	2						6				1			12
Cleftlirial contraction (Class XVII, Inter. 145C).....	S. and Y.			7	4									1	2		215
	H.																
	T.		5	9	4					6				2	2		227
	F. A.		1		1												2
Cleftrix of skin (Class XV, Inter. 145C).....	S. and Y.			1					1					1			0
	H.	1	1	1										1			304
	T.	1	1	2					1					1			304

Clavus (Class XV, Inter. 145C).....	F. A. S. and Y. H.....	1	7 8 3	3 4	8 5	1	54 72 108
	T.....	1	18	7	18	1	205
Colitis, acute (Class III, Inter. 108B).....	F. A. S. and Y. H.....	12 6	1 0	12 4	2	1	67 17
	T.....	18	2	16	2	2	84
Colitis, chronic (Class III, Inter. 108B).....	F. A. S. and Y. H.....	1	1 3	2 8	1	1	12 68
	T.....	1	1	5	5	1	76
Color blindness (Class VI, Inter. 76C).....	S. and Y. H.....	6 1	1 1	1	1	2	108 78
	T.....	7	2	1	6	2	181
Concretions in salivary gland (Class III, Inter. 90B).....	F. A. S. and Y. H.....	1	1	1	1	6	6
	T.....	1	1	1	1	5	5
Congestion of kidney (Class VII, Inter. 122).....	F. A. S. and Y. H.....	2	2	2	1	2	1
	T.....	2	2	2	1	2	2
Congestion of lung, acute (Class XIV, Inter. 94).....	F. A. S. and Y. H.....	94 51	4 1	80 35	2	14	479
	T.....	2	2	29	6	16	137
	T.....	3	148	34	143	30	1,133
Conjunctivitis, acute (Class VI, Inter. 76A).....	F. A. S. and Y. H.....	1 4	14 2	4 21	4 6	1 3	41 83
	T.....	5	30	27	32	4	784
Conjunctivitis, chronic (Class VI, Inter. 75A).....	F. A. S. and Y. H.....	2 1	2 1	2 1	2	1	9 0
	T.....	3	1	3	1	1	10
Conjunctivitis, phlyctenular (Class VI, Inter. 75A).....	F. A. S. and Y. H.....	3 1	3 1	3	3	1	28

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnos.	Place.	Taken up as—				Disposition.								Cont.	Days.
		Ram.	A.	R.A.	D.	C.	Desd.	DD.	IS.	H.	HL.	HT.	L.	T.	
Constipation (Class III, Inter. 110B).	F. A. S. and Y. H.	1	62 35 3	6 5 15	57 22 11	2 1 5				6 5				3 2	247 100 728
	T.	1	100	26	100	8			2	11				5	1,072
	F. A. S. and Y. H.		5 18 7	4 8 3					5 16 5	3 3 5				1 4	93 264 408
	T.		30	15	3	4			26	6				5	360
Constitutional psychopathic state (Class XI, Inter. 68).	F. A. S. and Y. H.		2 1	1 3	1 3				1 1	1					13 2 65
	T.		3	5	1	1			2	1				3	80
	F. A. S. and Y. H.		2 1	2 1	2 2	1				2					1 136
	T.		3	2	2	1				2					137
Contracture of joint (Class XII, Inter. 147).	F. A. S. and Y. H.		8 4 2	4 9	5 5				2	4 2				1 4	16 42 283
	T.	2	13	13	12				2	6			1	5	340
	F. A. S. and Y. H.		10 3	10 1	10 4										29 27
	T.		13	1	14										56
Cramp of muscle (Class XII, Inter. 149).	F. A. S. and Y. H.		6 13 1	3 1 4	3 1				6 13	2 1					77 36 207
	T.	1	20	8	1	2			10	3				4	320
	F. A. S. and Y. H.		6 13 1	3 1 4	3 1				6 13	2 1					77 36 207
	T.	1	20	8	1	2			10	3				4	320

Cystitis, acute (Class VII, Inter. 124).....	F. A. S. and Y. H.	24 12 1	2 15 5	17 12 5	8 5 1	1 8 1	283 69 392
Cystitis, chronic (Class VII, Inter. 124).....	T.	1	38	17	38	5	694
Cystoma (Class XIX, Inter. 46).....	F. A. S. and Y. H.	4 3 2	3 1 10	2 10 2	1 6 1	4 2 2	4 460 530
Deacryocystitis (Class VI, Inter. 76C).....	T.	2	10	14	10	2	530
Deafness (Class V, Inter. 76).....	F. A. S. and Y. H.	15 7 4	1 2 11	10 2 13	6 5 2	55 16 553	55 16 553
Deformity of external ear, acquired (Class V, Inter. 76C).....	T.	4	24	12	25	2	624
Deformity of nose, acquired (Class XIV, Inter. 86).....	F. A. S. and Y. H.	24 5 9	10 3 18	9 2 17	10 2 4	3 105 1,301	105 105 1,301
Deformity of palate, acquired (Class III, Inter. 146).....	T.	9	34	31	29	5	1,548
Deformity of penis, acquired (Class VI, Inter. 127).....	F. A. S. and Y. H.	1 10 5	1 4 45	1 1 41	8 1 9	8 18 1,817	8 18 1,817
Dementia, cause unknown (Class XI, Inter. 68).....	T.	5	39	50	43	9	1,842
Dementia, paralytics (Class XI, Inter. 67).....	F. A. S. and Y. H.	1 2 16	1 8 3	2 2 32	2 1 16	1 2 6	25 123 1,188
Dysentery (Class XII, Inter. 127).....	T.	5	22	42	2	16	1,372
Dysentery, paralytics (Class XI, Inter. 67).....	F. A. S. and Y. H.	2 1 6	1 1 11	1 1 2	2 1 5	2 4 4	0 68 2,178
Dysentery, paralytics (Class XI, Inter. 67).....	T.	6	8	12	3	5	2,236

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Dea.	DD.	Is.	H.	HI.	HT.	L.	T.			
Dementia, precox (Class XI, Inter. 68).....	F. A.....	26	7	7	1	1	1	1	4	25	1	1	1	2	1	167	
	S. and Y.....	11	2	2	2	1	1	1	1	7	3	1	1	1	1	100	
	H.....	22	89	89	2	27	1	1	31	1	25	1	1	31	10	5,916	
	T.....	16	59	98	3	27	1	1	36	32	29	1	1	34	11	6,183	
Dengue (Class VIII, Inter. 19).....	F. A.....	1	77	1	45	2	1	1	1	32	1	1	1	1	1	239	
	S. and Y.....	2	381	4	93	1	1	1	1	294	1	1	1	1	1	505	
	H.....	1	13	334	312	35	1	1	1	1	1	1	1	1	1	3,101	
	T.....	4	471	339	450	37	1	1	1	326	1	1	1	1	1	3,945	
Dentition (Class XVII, Inter. 189A).....	F. A.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	
	S. and Y.....	2	2	2	2	1	1	1	1	1	1	1	1	1	1	4	
	T.....	3	3	3	3	1	1	1	1	1	1	1	1	1	1	6	
	F. A.....	10	10	10	7	1	1	1	1	3	1	1	1	1	1	50	
Dermatitis, venenata (Class XV, Inter. 145C).....	S. and Y.....	28	1	1	24	1	1	1	1	5	1	1	1	1	1	188	
	H.....	1	2	9	11	1	1	1	1	1	1	1	1	1	1	115	
	T.....	1	40	10	42	1	1	1	1	8	1	1	1	1	1	353	
	F. A.....	23	5	5	18	1	1	1	1	7	1	1	1	1	1	162	
Dermatitis, unqualified (Class XV, Inter. 145C).....	S. and Y.....	9	1	1	9	1	1	1	1	1	1	1	1	1	1	90	
	H.....	2	2	11	5	5	1	1	1	1	1	1	1	1	2	278	
	T.....	34	17	17	32	5	1	1	1	8	1	1	1	2	3	530	
	F. A.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	
Detachment of retina (Class VI, Inter. 75C).....	S. and Y.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21	
	H.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	26	
	T.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	26	
	F. A.....	60	4	4	1	1	1	1	1	52	1	1	1	1	1	8	
Deviation of nasal septum (Class XIV, Inter. 86).....	S. and Y.....	7	7	7	2	1	1	1	1	5	1	1	1	1	1	13	
	H.....	6	23	54	71	6	1	1	1	1	1	1	1	1	1	2,087	
	T.....	6	80	58	74	6	1	1	1	57	1	1	1	1	1	5	
	F. A.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2,708	

Diabetes insipidus (Class XVII, Inter. 50).....	F. A.....	5	5	5	1	1	2	1	1	1	1	111
	H.....	5	5	5	2	2	2	3	3	3	3	139
	T.....	5	10	5	3	3	2	1	4	4	4	250
Diabetes mellitus (Class XVII, Inter. 50).....	F. A.....	7	7	1	1	1	2	8	2	2	2	109
	S. and Y.....	5	4	3	3	3	5	5	1	1	1	278
	H.....	4	20	9	2	1	1	1	12	12	1	1,386
	T.....	5	14	31	3	3	1	13	1	15	2	1,773
Diagnosis undetermined (Class XVII, Inter. 130A).....	F. A.....	1	1	1	1	1	1	1	1	1	1	14
	H.....	1	1	1	1	1	1	1	1	1	1	273
	T.....	2	2	1	1	1	1	1	1	1	1	287
Dilatation, acute cardiac (Class II, Inter. 79C).....	F. A.....	2	2	1	1	1	1	1	1	1	1	0
	S. and Y.....	2	2	1	1	1	2	1	0	0	0	121
	H.....	2	2	1	1	1	1	1	1	1	1	121
	T.....	4	4	2	1	1	3	1	1	1	1	121
Dilatation, chronic cardiac (Class II, Inter. 79C).....	F. A.....	1	1	1	1	1	1	1	1	1	1	9
Dilatation of stomach, chronic (Class III, Inter. 103).....	S. and Y.....	2	1	1	1	1	1	3	3	3	3	9
	H.....	2	4	1	3	3	1	1	1	1	1	56
	T.....	2	5	1	3	3	1	3	3	3	3	65
Diphtheria (Class VIII, Inter. 9).....	F. A.....	12	27	26	1	1	11	11	1	1	1	382
	S. and Y.....	6	55	23	8	8	6	6	2	2	2	1,470
	H.....	6	55	23	8	8	6	6	27	27	27	1,834
	T.....	6	73	50	9	9	17	17	28	28	28	1,834
Diverticulum of intestines, acquired (Class III, Inter. 110B).....	S. and Y.....	1	2	1	1	1	1	1	1	1	1	0
	H.....	1	2	1	1	1	1	1	1	1	1	6
	T.....	1	2	1	1	1	1	1	1	1	1	6
Duodenitis (Class III, Inter. 106B).....	F. A.....	9	9	6	1	1	3	3	1	1	1	78
	S. and Y.....	1	1	1	1	1	1	1	1	1	1	9
	H.....	1	1	4	1	3	1	1	1	1	1	248
	T.....	1	10	4	8	3	4	4	4	4	4	335
Dysentery, bacillary (Class VIII, Inter. 14A).....	F. A.....	2	2	2	2	2	2	2	2	2	2	11
	S. and Y.....	7	7	1	6	6	1	1	1	1	1	41
	H.....	3	3	2	4	4	2	2	1	1	1	102
	T.....	12	12	8	12	12	2	2	2	2	2	214

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—						Disposition.							Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Dea.	DD.	IS.	H.	HL.	HT.	L.	T.		
Dysentery, subacute (Class XVIII, Inter. 14C).	F. A.	20	9	17	1									4	.....	219
	S. and Y.	15	10	2										1	.....	28
	H.	4	9	37	30	2			1	21				7	11	2,374
	T.	4	44	56	49	3			1	28				12	11	2,646
Dysentery, unclassified (Class VIII, Inter. 14D).	F. A.	34	7	24				1		11					4	219
	S. and Y.	1	109	13	92				13	29				2	3	513
	H.		6	41	35	8		1								946
	T.	1	149	61	151	8		2		40				6	4	1,698
Dysidrosis (Class XV, Inter. 145C).	S. and Y.		1		1											0
	H.															
Dystrophy, progressive muscular (Class XIII, Inter. 69).	F. A.	1	2						1	2				1	1	2
	H.															111
Ectropion (Class VI, Inter. 76C).	T.		1	4					1	2				1	1	113
	H.	1			1											104
Eczema (Class XV, Inter. 145C).	F. A.	33	15	30					3	10				2	2	330
	S. and Y.	24	4	12					1	15						180
	H.	3	6	27	22	6							1	3	4	955
	T.	3	63	46	64	6			4	25			1	5	6	1,533
Embolism (Class II, Inter. 82).	S. and Y.		1	1											1	149
	H.															
Empyema, pulmonary (Class XIV, Inter. 97).	F. A.	4	2	1										1		17
	S. and Y.	2	1													26
Endocarditis, acute (Class II, Inter. 78).	H.	1	2	4	3	1		1	1	1				2		180
	T.	1	8	7	4	2		2	1	4				3		221
Endocarditis, chronic (Class II, Inter. 79B).	F. A.	7	2	1					6	2						66
	S. and Y.	2	1	1					2							20
	H.		3	1		1								4		253
	T.	2	10	6	3	1			8	2				4		344

Enteritis, acute (Class III, Inter. 106B).....	F. A. S. and Y.	1 3 3	160 198 7	2 6 31	2 119 30	187 4	538 647 832
T.....	T.	6	306	39	306	4	1,882
Enteritis, chronic (Class III, Inter. 106B).....	F. A. S. and Y.	.. .. ..	4 2 1	2 9 9	2 4 3	.. .. ..	10 157 187
T.....	T.	..	7	13	7	3	254
Enteroocolitis (Class III, Inter. 106B).....	F. A. S. and Y.	.. .. ..	2 .. 1	.. .. ..	.. 1 ..	.. .. ..	24 .. 12
T.....	T.	..	3	..	2	1	46
Epididymitis, acute (Class VII, Inter. 127).....	F. A. S. and Y.	2	33 9 2	5 1 10	33 4 8	.. .. 2	312 62 208
T.....	T.	2	43	16	45	2	582
Epididymitis, chronic (Class VII, Inter. 127).....	F. A. S. and Y.	.. .. ..	2 1 1	1 1 1	2 1 2	.. .. ..	30 7 34
T.....	T.	..	4	3	5	..	71
Epilepsy (Class XIII, Inter. 69).....	F. A. S. and Y.	.. 1 9	47 30 11	45 17 65	17 4 18	.. 9 2	711 377 2,591
T.....	T.	10	88	127	39	9	3,579
Epilepsy, Jacksonian (Class XIII, Inter. 74).....	F. A. H.	.. .. ..	2	3 2 ..	1 1 ..	.. .. ..	25 18 ..
T.....	T.	..	2	5	1	1	43
Epiphora (Class VI, Inter. 76C).....	S. and Y. H.	.. .. ..	.. 1 1	.. 1 ..	.. .. ..	.. .. ..	0 .. 146
T.....	T.	..	..	2	..	..	146
Epistaxis (Class XIV, Inter. 85).....	F. A. S. and Y.	.. .. ..	1 1 ..	.. 1 1	.. 1 1	.. .. ..	0 1 12
T.....	T.	..	2	1	2	..	13

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—			Disposition.										Cont.	Days.	
		Rem.	A.	RA.	D.	C.	Desd.	DD.	IS.	H.	HI.	HT.	L.	T.			
Epithelioma (Class XIX, Inter. 30-45).....	F. A.....		2														0
	H.....			2	2												220
	T.....		2	2	2												220
Erysipelas (Class VIII, Inter. 18).....	F. A.....	1	11		5												105
	S. and Y.....		4		2												30
	H.....		4	11	10	3										2	323
	T.....	1	10	11	17	3										2	467
Erythema multiforme (Class XV, Inter. 145C).....	F. A.....		2		2												6
	S. and Y.....		2		2												25
	T.....		4		4												31
Erythema simplex (Class XV, Inter. 145C).....	F. A.....		4		4												15
	S. and Y.....		2		1												2
	H.....			1	1												5
	T.....		6	1	6												23
Eustachian salpingitis, acute (Class V, Inter. 76).....	F. A.....		1		1												0
	S. and Y.....		3		1												0
	H.....		1	1	2												5
	T.....			3	2	1											122
Exophthalmic goitre (Class IV, Inter. 51).....	F. A.....		4	4	5	1											177
	S. and Y.....																0
	H.....	2	1	2	4											1	29
	T.....	2	4	4	4											2	126
Favus (Class XVIII, Inter. 26B).....	H.....		1	1												1	155
																1	38

[illegible]

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—						Disposition.							Cont.	Days.
		Ram.	A.	R.A.	D.	C.	Decd.	DD.	IS.	H.	HI.	HT.	L.	T.		
Fistula of kidney (Class VII, Inter. 123).....	H.....		1												1	98
Fistula of lachrymal sac (Class VI, Inter. 76C).....	F. A.....		1	2	1					1				1		0
	H.....															24
	T.....		1	2	1					1				1		24
	H.....		1		1											37
Fistula of larynx (Class XIV, Inter. 87).....	F. A.....		2													0
Fistula of urethra (Class VII, Inter. 125).....	H.....	1		2	2	1				2						180
	T.....	1	2	2	2	1				2						180
Flagellate diarrhoea (Class XVIII, Inter. 105B).....	F. A.....			1	1											6
	H.....		2		1									1		12
	T.....		2	1	2									1		18
	F. A.....		1		1											1
Foreign body in auditory canal (Class V, Inter. 76).....	S. and Y.....		1													1
Foreign body in esophagus (Class III, Inter. 101).....	S. and Y.....		1													1
Functional derangement of liver (Class III, Inter. 115).....	F. A.....		10		6					4						80
	S. and Y.....		16		9					7						70
	H.....		3	11	10	4										348
	T.....		29	11	25	4				11						408
Furunculosis (Class VIII, Inter. 143).....	F. A.....		259	14	265					13					4	1,380
	S. and Y.....	1	83	7	82					7					4	499
	H.....	3	5	23	24	5							1			554
	T.....	4	349	43	392	5				20			1		8	2,393
Ganglion (Class XII, Inter. 149).....	S. and Y.....		2		2											27
	H.....		1			1										13
	T.....		3		2	1										40
Gangrene (Class XVII, Inter. 142).....	S. and Y.....		1		1											21

Gastritis, acute catarrhal (Class III, Inter. 103).....	F. A.....	1	60	2	51	2	70	19	1	237
	T.....	7	74	27	26	7	7	10	106	106
			8						2	533
Gastritis, chronic catarrhal (Class III, Inter. 103).....	F. A.....	1	151	36	147	9		29	1	966
	S. and Y.....			8	11				2	247
	H.....	1	43	5	7		1	37	1	109
		5	20	75	36	28	4	14	13	2,667
	T.....	6	6						15	3,023
	S. and Y.....		68	88	54	28		51	9	0
Gastritis, acute phlegmonous (Class III, Inter. 103).....	F. A.....	1	1	1	1			1		7
	H.....									7
	T.....		1	1	1			1		7
Gastrodysenteritis (Class III, Inter. 103B).....	F. A.....	8	8	1	3			6		46
	S. and Y.....	25	25	1	19			7		99
	H.....	7	7	15	16	2			1	517
	T.....		40	17	38	2		13		663
Gastroenteritis (Class III, Inter. 103B).....	F. A.....	48	48	4	39		1	9	2	179
	S. and Y.....	27	27	2	21	1		6	1	74
	H.....	4	4	25	12	12			2	286
	T.....		79	31	72	13		1	5	539
Gastroptosis (Class III, Inter. 103).....	F. A.....	1	1							27
	H.....	2	2	1		1			2	86
	T.....		3	1		1				113
Genu recurvatum (Class XII, Inter. 147).....	S. and Y.....		1							6
German measles (Class VIII, Inter. 19).....	F. A.....	64	64		27			36	1	270
	S. and Y.....	81	81	1	22			60		238
	H.....	10	21	101	117	9			1	2,369
	T.....	10	168	102	165	9		96	2	2,925
Gingivitis (Class III, Inter. 99A).....	F. A.....	2	2		2					5
	S. and Y.....	1	1		1					13
	H.....									41
	T.....	1	4		5					59

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—					Disposition.							Cont.	Days.
		Rem.	A.	RA.	D.	C.	Disd.	DD.	IS.	H.	HI.	HT.	L.	T.	
Glaucoma, chronic (Class VI, Inter. 76C).	F. A.		1	1					1	1					1
	S. and Y.		1		1										36
	H.			1										1	33
	T.		2	2	1				1	1				1	74
Glioma (Class XIX, Inter. 46).	S. and Y.		1	1											0
	H.			3	1	1				2					221
	T.		1	4	1	1				2					221
	S. and Y.		1		1					1					0
Glossitis, acute (Class III, Inter. 99B).	H.			1											12
	T.		1	1	1					1					12
	S. and Y.		1		1										0
	H.														6
Glyocouris (Class XVII, Inter. 80).	F. A.		1		1										0
	S. and Y.		1		1										6
	H.														6
	T.		2		2										6
Goitre (Class IV, Inter. 88).	F. A.		11	3	1				1	12					17
	S. and Y.		1	2					2	1					3
	H.	2	6	15	13	5								3	799
	T.	2	18	20	14	5			3	13				3	799
Gonocystitis, chronic (nonvenereal) (Class VII, Inter. 127).	S. and Y.		1												1
	H.			1	1					1					10
	T.		1	1	1					1					11
	S. and Y.		2	2	1										44
Gonococcus infection of conjunctiva (Class IX, Inter. 38B).	S. and Y.		8	2	5				1	3				1	192
	H.	4		8	5	4								2	486
	T.	4	11	12	11	4			1	7				3	708
	S. and Y.														0

Genococcus infection of joints (Class IX, Inter. 38B).	F. A.	3	66	70	30	1	.....	24	75	.....	.....	.....	6	3	1,033
	S. and Y.	29	32	18	18	29	.....	7	23	.....	.....	.....	48	2	379
	H. ....	.....	28	124	70	.....	.....	.....	.....	.....	.....	.....	.....	34	9,228
	T.	32	126	212	118	30	.....	31	98	.....	.....	.....	54	39	10,680
Genococcus infection of lymph-node (Class IX, Inter. 38B).	F. A.	4	51	21	46	2	.....	.....	23	.....	.....	.....	3	2	685
	S. and Y. ....	.....	27	6	18	.....	.....	.....	14	.....	.....	.....	3	1	346
	H.	11	.....	35	37	4	.....	.....	23	.....	.....	.....	3	2	1,984
	T.	15	78	62	101	6	.....	.....	37	.....	.....	.....	6	5	2,986
Genococcus infection of urethra (Class IX, Inter. 38B).	F. A.	11	4,336	496	4,565	10	.....	18	229	.....	.....	.....	7	14	6,185
	S. and Y.	2	885	144	845	2	.....	9	119	.....	.....	.....	1	5	1,692
	H.	89	149	418	466	75	5	.....	39	.....	.....	.....	39	71	25,337
	T.	102	5,320	1,058	5,876	87	5	.....	47	.....	.....	.....	47	90	33,204
Genococcus infection, unqualified (Class IX, Inter. 38B).	F. A.	14	233	89	264	1	.....	3	74	.....	.....	.....	8	6	3,404
	S. and Y.	3	64	30	53	2	.....	2	32	.....	.....	.....	3	5	933
	H.	17	21	120	107	21	2	.....	11	.....	.....	.....	11	17	6,254
	T.	34	338	239	424	24	2	.....	22	.....	.....	.....	22	28	10,680
Gout, acute (Class XVII, Inter. 48C).	F. A.	1	2	1	1	.....	.....	.....	1	.....	.....	.....	1	1	86
	S. and Y. ....	.....	3	1	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	H. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	T.	1	5	2	5	.....	.....	.....	1	.....	.....	.....	1	1	86
Gout, chronic (Class XVII, Inter. 48C).	F. A. ....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	S. and Y. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	H. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	T. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hallux valgus (Class XII, Inter. 149).	F. A.	12	12	1	4	.....	.....	2	6	.....	.....	.....	1	.....	49
	S. and Y.	5	3	3	2	.....	.....	3	2	.....	.....	.....	1	.....	103
	H.	5	5	8	8	1	.....	.....	.....	.....	.....	.....	1	2	466
	T. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hammer toe (Class XII, Inter. 149).	F. A.	22	22	12	14	1	.....	5	8	.....	.....	.....	1	3	618
	S. and Y. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	H. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	T. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hay fever (Class XIV, Inter. 98).	F. A.	5	5	1	1	.....	.....	1	4	.....	.....	.....	.....	.....	43
	S. and Y. ....	.....	6	1	2	.....	.....	2	3	.....	.....	.....	.....	.....	81
	H. ....	.....	4	8	10	1	.....	.....	.....	.....	.....	.....	.....	.....	363
	T. ....	.....	15	10	13	1	.....	3	7	.....	.....	.....	1	.....	466
Headache (Class XVII, Inter. 159A).	F. A.	8	8	2	7	1	.....	.....	2	.....	.....	.....	.....	.....	36
	S. and Y.	18	18	3	17	2	.....	.....	1	.....	.....	.....	.....	.....	33
	H. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22
	T.	26	26	6	25	3	.....	.....	3	.....	.....	.....	.....	.....	91

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosed.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Ded.	DD.	IS.	H.	HI.	HT.	L.	T.			
Heart block (Class II, Inter. 86).....	S. and Y.		1		1												14
Hematemesis (Class III, Inter. 108).....	F. A.	1			1												2
	S. and Y.	1		1	1								1				0
	H.																12
	T.		2	1	2								1				16
	H.		1		1												22
Hematocoele of spermatic cord (Class VII, Inter. 127).....																	
Hematuria, renal (Class VII, Inter. 122).....	F. A.	2		2									2				10
	H.					2											30
	T.		2	2		2							2				40
	S. and Y.	1		2	1								1				0
	H.			2	1	1											2
	T.		1	2	1	1							1				2
	F. A.	3											3				6
	S. and Y.	2	2	4	1	2											91
	H.															2	283
	T.	2	5	5	2	2							3				330
	F. A.		1	1	1												1
	F. A.	1									1						17
Hemoglobinuria fever (Class VIII, Inter. 19).....																	
	F. A.	1	1										1				7
	H.		1			1											11
	T.		1	2		1							1				18
	F. A.	3			1								2				6
	H.			3	1	2											79
	T.		3	3	2	2							2				86
	H.		1	1	1	1											4
Hemorrhage, intestinal (Class III, Inter. 110B).....																	

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—					Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Dsd.	DD.	IS.	H.	HI.	HT.	L.	T.				
Herpes (Class XV, Inter. 145C).....	F. A.....		9		8													20
	S. and Y.....		1		1					1								4
	H.....		1	3	3													66
	T.....		11	3	12	1				1								99
Hodgkin's disease (Class X, Inter. 53A).....	F. A.....		1	2					1	2								10
	S. and Y.....		1	4										3		1	94	
	H.....																	
	T.....		2	6		1			1	2				3		1	104	
Hordoeolum (Class VI, Inter. 75C).....	F. A.....		8		8													22
	S. and Y.....		5		5													12
	H.....																	
	T.....		13		13													34
Hydrocele of spermatic cord (Class VII, Inter. 127)...	F. A.....		3		3													9
	S. and Y.....		4	1	1				1	3							9	
	H.....		1	3	4									1			78	
	T.....		1	8	8				1	3					1			96
Hydrocele of tunica vaginalis (Class VII, Inter. 127)...	F. A.....		12	1	3	1				9								22
	S. and Y.....		13	4	7					10								76
	H.....		5	20	19	5							1				965	
	T.....		1	30	29	6				19				1	1		1,063	
Hydrocephrosis (Class VII, Inter. 122).....	S. and Y.....		1	1	2													6
	S. and Y.....		1							1								12
	H.....			1													9	
	T.....		1	1		1				1								21
Hyperthylia, gastric (Class III, Inter. 103).....	F. A.....		1							1								6
	S. and Y.....		1							1								6
	H.....		2	4	3													111
	T.....		4	4	2	3				2								117

Hypermetropia (Class VI, Inter. 75C).....	F. A. S. and Y. H.....	1	8 7 3 14	1 2 3 12	2	1 6	6 2	
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TABLE 1.—Detailed statement of disease and injury for the calendar year 1915—Continued.

Diagnosis.	Place.	Taken up as—			Disposition.										Cont.	Days.
		Rem.	A.	RA.	D.	C.	Ded.	DD.	IS.	H.	HL.	HT.	L.	T.		
Impetigo contagiosa (Class XV, Inter. 145 C).	F. A.	8	8	.....	5	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	46
	S. and Y.	23	23	.....	14	.....	.....	.....	.....	9	.....	.....	.....	.....	.....	69
	H.	1	1	13	11	1	.....	.....	.....	.....	.....	.....	.....	.....	2	373
	T.	32	32	13	30	1	.....	.....	.....	12	.....	.....	.....	.....	2	463
Incontinence of urine (Class VII, Inter. 124).	F. A.	6	6	.....	1	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	101
	S. and Y.	1	7	3	1	.....	.....	.....	7	3	.....	.....	.....	.....	.....	27
	H.	2	3	3	.....	2	.....	.....	.....	.....	.....	.....	.....	3	.....	93
	T.	3	13	6	2	2	.....	.....	12	3	.....	.....	.....	3	.....	221
Inflammation of salivary gland (Class III, Inter. 99B).	S. and Y.	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	H.	.....	.....	4	2	2	.....	.....	.....	3	.....	.....	.....	.....	.....	53
	T.	.....	3	4	2	2	.....	.....	.....	3	.....	.....	.....	.....	.....	59
	F. A.	6	599	6	572	5	.....	.....	.....	20	.....	.....	.....	9	5	2,185
Influenza (Class VIII, Inter. 10).	S. and Y.	12	332	16	369	11	.....	.....	.....	23	.....	.....	.....	.....	7	2,106
	H.	5	17	.....	41	30	.....	.....	.....	.....	.....	.....	.....	.....	3	817
	T.	23	998	74	962	46	.....	.....	.....	43	.....	.....	.....	9	15	5,008
	F. A.	.....	113	2	112	.....	.....	.....	.....	2	.....	.....	.....	.....	1	760
Ingrowing nail (Class XV, Inter. 145C).	S. and Y.	1	86	2	72	.....	.....	.....	2	13	.....	.....	.....	.....	2	641
	H.	2	9	15	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	623
	T.	3	208	19	210	.....	.....	.....	2	15	.....	.....	.....	.....	3	2,024
	F. A.	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	0
Insomnia (Class XVII, Inter. 189A).	S. and Y.	.....	2	.....	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	11
	H.	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38
	T.	.....	3	2	3	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	69
	F. A.	.....	6	2	1	.....	.....	.....	3	4	.....	.....	.....	.....	.....	28
Insufficiency of ocular muscle (Class VI, Inter. 78C).	S. and Y.	6	2	6	2	71
	H.	1	4	6	5	1	1	3	1	463
	T.	1	16	10	6	1	10	6	3	1	574
	F. A.

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—			Disposition.										Cont.	Days.		
		Rem.	A	R.A.	D.	C.	Ded.	DD.	IS.	H.	HT.	L.	T.					
Lichen, planus (Class XV, Inter. 145C).....	F. A.....		1		1												0	
Lipoma (Class XIX, Inter. 46).....	F. A.....		4	1	4												15	
	S. and Y.....		5		2												6	
	H.....		1	2	3				1	2							56	
T.....			10	3	9												77	
Locomotor ataxia (Class XIII, Inter. 63).....	F. A.....			2													45	
	H.....	1		1									2				125	
	T.....	1		3									2				170	
Loss of substance of (bone or cartilage) (Class XII, Inter. 146).....	F. A.....		1	1													0	
	H.....		1	1									2				64	
	T.....		2	2									2				64	
Lupus, erythematosus (Class XV, Inter. 145C).....	F. A.....		2														0	
	H.....			3	1	1										1	132	
	T.....		2	3	1	1										1	132	
Lymphadenitis, acute (Class X, Inter. 84).....	F. A.....	7	135	18	104	2											1,708	
	S. and Y.....	5	44	20	46	5											1,438	
	H.....	3	7	58	44	12											2,408	
T.....	15	198	96	193	19											15	5,647	
Lymphadenitis, chronic (Class X, Inter. 84).....	F. A.....		10	2	3												102	
	S. and Y.....		4	2	4												127	
	H.....	6	1	15	15	2								1	2	1	1,176	
T.....	6	15	19	23	2											1	1,405	
Lymphangiectasis (Class X, Inter. 84).....	H.....		1														1	61
Lymphangioma (Class XIX, Inter. 46).....	F. A.....		1		1												7	

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Decl.	DD.	IS.	H.	HI.	HT.	L.	T.			
Meningitis, cerebral (Class XIII, Inter. 61).....	F. A.....		2														12
Meningitis, cerebrospinal (Class XIII, Inter. 61).....	F. A..... S. and Y..... H.....	1 3 2	1 2 2	1 2 2						2				1			10 165 90
	T.....		6	3	4					2				1			265
Metatarsalgia (Class XII, Inter. 149).....	F. A..... S. and Y..... H.....	3 2 1	1 1 6	1 1 6	1				1 1	2 1						1	9 22 257
	T.....		6	7	1	1			2	3				3	3		268
Migraine (Class XVII, Inter. 74).....	F. A..... S. and Y..... H.....	1 6 2	1 1 1	1 6 1	1 6				1 1								4 21 107
	T.....		9	3	6				2	1				3			132
Miliaria (Class XV, Inter. 145C).....	F. A..... S. and Y.....	1 3		1 3	1 3												2 9
	T.....		4		4												11
Mixed benign tumor (Class XIX, Inter. 46).....	F. A..... S. and Y.....	1 1		1 1	1 1												9 30
	T.....		1	1	2												30
Mumps (Class VIII, Inter. 19).....	F. A..... S. and Y..... H.....	304 305 5	5 6 65	136 200 353	1 1 1					263 74				5	4		2,224 2,025 8,847
	T.....		6	854	831	788	26			837				9	61		16,136
Mycosis fungoides (Class XV, Inter. 28B).....	F. A.....		1		1												0
Myocarditis, acute (Class II, Inter. 78).....	F. A..... S. and Y..... H.....	1 1 1		1 1 1	1 2									1			1 37
	T.....		1	2	3									1			28

[illegible]

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Dsd.	DD.	IS.	H.	HL.	HT.	L.	T.			
Nephritis, chronic parenchymatous (Class VII, Inter. 120).	F. A.	12	9							15					25		
	S. and Y.	7	4		3				3	5					133		
	H.	1	7	29	13	5		1					1	13	1,213	4	
	T.	1	26	42	16	5		1	9	20			1	13	1,301	4	
Nephrolithiasis (Class VII, Inter. 123).	F. A.	2	7	3	7					5					54		
	S. and Y.	8	3	3	5				4	4			1	1	105		
	H.	1	2	12	10	3		1							346	1	
	T.	3	17	18	22	3		1		9			1	1	505	1	
Nephropoiesis (Class VII, Inter. 122).	F. A.	1	1	1						1					14		
	H.		1	2	2									1	42		
	T.		2	3	2					1				2	56		
	F. A.	6	1		4				1	2					45		
Nervous dyspepsia (Class III, Inter. 103).	S. and Y.	1	4		3					2					22		
	H.	1	1	4	4	1								1	183		
	T.	2	11	5	11	1			1	4				1	250		
	F. A.	35	12		35				3	8					154		
Neuralgia (Class XIII, Inter. 73B).	S. and Y.	2	16	4	16	2				4					100		
	H.	1	2	13	8	2								4	519	2	
	T.	3	53	29	59	4			3	12				4	733	3	
	F. A.	63	19	22	23	1			10	45			1	1	509		
Neurasthenia (Class XIII, Inter. 74).	S. and Y.	3	26	17	16	1			3	20					1,173		
	H.	15	13	102	49	36		1	3				7	26	3,506	13	
	T.	18	107	133	87	38		1	16	66			9	27	5,233	19	
	F. A.	40	9		22				3	20				3	1	490	
Neuritis (Class XIII, Inter. 73B).	S. and Y.	2	20	13	13	1			9	11					565		
	H.	5	12	49	20	15								22	9	3,320	
	T.	7	73	71	55	16			12	31				26	10	4,405	

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.								Cont.	Days.
		Rem.	A.	RA.	D.	C.	Dsd.	DD.	IS.	H.	HL.	HT.	L.	T.	
Nostalgia (Class XVII, Inter. 68)	S. and Y.		3	1											2
	H.			6	2	4				4					49
	T.		3	7	2	4				4					51
Nyctagmus (Class VI, Inter. 76C)	F. A.		1							1					1
	S. and Y.		1							1					0
	H.			3	1	2									106
T.															
			2	3	1	2				2					167
			1	1	1				1						23
Obesity (Class XVII, Inter. 45)	S. and Y.														
	F. A.		3			1				2					32
	S. and Y.		1		3	1		1							2
Obstruction, acute intestinal (Class III, Inter. 109)	H.		1	3											78
	T.		1	5	3	4	2		1	2					112
Obstruction, chronic intestinal (Class III, Inter. 109)	F. A.		2							2					6
	S. and Y.			1	1										31
	H.		1	4	3	1							1		118
T.															
			3	5	4	1				2			1		155
Obstruction of portal vein (Class III, Inter. 115)	F. A.		1							1					1
	S. and Y.			1											16
	H.														
T.			1	1						1					17
			1	1						1					1
Onychia (Class XV, Inter. 146C)	F. A.		1							1					1
	S. and Y.				1										5
	H.														
T.			1	1	1					1					6
Onychia (Class XV, Inter. 146C)	F. A.		1		22					3					307
	S. and Y.		8		1					2					89
	H.			6	5	1									271
T.															
			1	23	6	32	2			5					506

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Desd.	DD.	IS.	H.	HL.	HT.	L.	T.			
Otitis interna, chronic (Class V, Inter. 76)	F. A.		4	4	2											29	
	S. and Y.		2	1	1				2	4						2	
	H.		1	4	2	1							1		1	245	
	T.		7	9	5	1			2	6			1		1	276	
Otitis media, acute (Class V, Inter. 76)	F. A.	1	101	14	81				1	32				2		495	
	S. and Y.		58	4	35				1	22				2	1	458	
	H.	8	12	54	48	12	1		1				2	6	4	2,225	
	T.	9	171	72	164	13	1		3	54			2	10	5	3,178	
Otitis media, chronic (Class V, Inter. 76)	F. A.	1	120	48	69	2			35	62				1		343	
	S. and Y.	1	68	26	40	1			27	22				1	4	404	
	H.	14	22	120	62	12	1		2					65	14	6,708	
	T.	16	210	194	171	15	1		64	84			1	66	18	7,635	
Ozena (Class XIV, Inter. 86)	F. A.		1							1						0	
	S. and Y.		1							1						0	
	H.			2		1								1		140	
	T.		2	2		1				2				1		140	
Pachymeningitis, cerebral (Class XIII, Inter. 61)	F. A.		2	1	1					2						0	
	S. and Y.								1							0	
	H.		1	2	1	1								1		78	
	T.		3	4	2	1			1	2				1		78	
Palpitation, cardiac (Class II, Inter. 85)	F. A.		15	8	8				2	13						125	
	S. and Y.		7	1	1				4	8						11	
	H.	2	1	21	10	3	1							7	3	733	
	T.	2	23	30	19	3	1		6	16				7	3	869	
Pancreatitis, acute (Class III, Inter. 118)	F. A.		2		2											32	

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TABLE 1.—*Detailed statement of disease and injury for the calendar year 1915—Continued.*

Diagnosis.	Place.	Taken up as—				Disposition.								Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Dsd.	DD.	IS.	H.	HI.	HT.	L.	T.	
Pediculosis (Class XVIII, Inter. 145C)	F. A.	.....	4	.....	3	.....	.....	.....	.....	1	.....	.....	.....	.....	6
	S. and Y.	.....	2	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	1
	H.	.....	4	3	2	3	.....	.....	.....	.....	.....	.....	.....	2	131
	T.	.....	10	3	6	3	.....	.....	.....	2	.....	.....	.....	2	133
Pemphigus (Class XV, Inter. 145C)	F. A.	.....	2	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	8
	S. and Y.	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	19
	H.	1	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1	63
	T.	1	3	1	3	.....	.....	.....	.....	1	.....	.....	.....	1	96
Perforated nasal septum (Class XIV, Inter. 86)	F. A.	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	8
Pericarditis (Class II, Inter. 77)	S. and Y.	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	0
.....	H.	.....	1	2	1	1	.....	1	.....	.....	.....	.....	.....	.....	6
.....	T.	.....	2	2	1	1	.....	1	.....	1	.....	.....	.....	.....	6
Pericardium, adherent (Class II, Inter. 77)	F. A.	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
Perichondritis of auricle (Class V, Inter. 76)	F. A.	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
.....	F. A.	.....	19	2	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	218
.....	S. and Y.	.....	7	3	4	.....	.....	.....	.....	5	.....	.....	.....	1	62
.....	H.	.....	3	10	10	.....	.....	.....	.....	1	.....	.....	.....	1	516
.....	T.	.....	29	15	27	.....	.....	.....	.....	1	.....	.....	.....	2	798
.....	F. A.	.....	8	8	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	39
.....	S. and Y.	.....	1	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....	0
.....	H.	3	3	12	6	1	1	.....	.....	.....	.....	.....	.....	8	1,117
.....	T.	3	12	21	11	1	1	.....	.....	9	.....	.....	.....	8	1,166
.....	S. and Y.	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
.....	H.	.....	1	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	116
.....	T.	.....	2	1	1	.....	.....	1	.....	1	.....	.....	.....	.....	116
.....	H.	.....	1	1	.....	1	.....	1	.....	.....	.....	.....	.....	.....	14

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Dsd.	DD.	IS.	H.	HI.	HT.	L.	T.			
Pleurisy, chronic fibrinous (Class XIV, Inter. 93).....	F. A.	.....	7	3	2	.....	.....	.....	3	5	.....	.....	.....	.....	.....	.....	31
	S. and Y.	.....	5	2	1	.....	.....	.....	1	5	.....	.....	.....	.....	.....	.....	11
	H.	3	6	23	14	7	.....	.....	1	.....	.....	2	.....	6	2	.....	1,186
	T.	3	18	27	17	7	.....	.....	5	10	.....	2	.....	5	2	.....	1,228
Pleurisy, serofibrinous (Class XIV, Inter. 93).....	F. A.	.....	18	5	6	1	.....	.....	2	13	.....	.....	.....	.....	1	.....	209
	S. and Y.	.....	5	1	2	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	81
	H.	1	9	24	17	7	1	1	.....	.....	.....	.....	.....	6	2	.....	1,648
	T.	1	32	30	25	8	1	1	2	16	.....	.....	.....	7	3	.....	1,933
Pleurisy, suppurative (Class XIV, Inter. 93).....	F. A.	.....	4	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	110
	S. and Y.	1	.....	2	1	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	16
	H.	7	3	2	6	2	.....	.....	.....	.....	.....	.....	.....	3	1	.....	1,087
	T.	8	7	4	9	2	.....	.....	2	.....	.....	.....	.....	4	2	.....	1,213
Pleuritic adhesions (Class XIV, Inter. 93).....	F. A.	.....	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	29
	S. and Y.	.....	2	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	13
	H.	.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	60
	T.	.....	3	3	2	.....	.....	.....	.....	2	.....	.....	.....	1	1	.....	102
Pneumonia, broncho- (Class XIV, Inter. 91).....	F. A.	.....	27	1	9	.....	.....	.....	.....	17	.....	.....	.....	.....	.....	.....	184
	S. and Y.	.....	17	2	4	1	.....	.....	3	11	.....	.....	.....	.....	1	.....	206
	H.	1	4	23	15	9	.....	.....	1	.....	.....	.....	.....	2	6	.....	781
	T.	1	48	31	28	10	.....	.....	5	.....	.....	.....	.....	.....	7	.....	1,171
Pneumonia, lobar (Class XIV, Inter. 92).....	F. A.	1	84	4	24	4	.....	.....	.....	57	.....	.....	.....	1	1	.....	663
	S. and Y.	2	40	3	6	2	.....	.....	3	27	.....	.....	.....	.....	5	.....	367
	H.	15	17	101	78	35	1	11	.....	.....	.....	.....	.....	3	5	.....	3,909
	T.	18	141	108	108	41	1	16	.....	84	.....	.....	.....	2	4	11	4,939
Poliomyelitis, acute anterior (Class VIII, Inter. 93).....	F. A.	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	79
	S. and Y.	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	155
	H.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	T.	.....	1	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	1	234

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—			Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Desd.	DD.	IS.	H.	HI.	HT.	L.	T.		
Psychosis, epileptic (Class XI, Inter. 69).....	S. and Y.	.....	3	.....	1	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	8
	H.	.....	4	4	.....	1	.....	.....	1	.....	3	.....	.....	1	.....	208
	T.	.....	7	4	1	.....	.....	.....	1	2	3	.....	.....	1	.....	216
Psychosis (exhaustive, infective, and toxic) (Class XI, Inter. 68).....	F. A.	.....	1	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	14
	S. and Y.	.....	2	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	90
	H.	.....	2	9	3	.....	1	.....	1	.....	3	.....	.....	2	.....	463
Psychosis, hysterical (Class XI, Inter. 72A).....	T.	.....	5	10	3	.....	1	.....	1	4	3	.....	.....	2	.....	566
	F. A.	.....	5	1	1	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	21
	S. and Y.	.....	1	2	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	10
Psychosis, intoxication (Class XI Inter. 68).....	H.	.....	1	10	6	.....	2	.....	.....	.....	1	.....	.....	.....	.....	202
	T.	.....	7	13	7	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	223
	F. A.	.....	29	1	8	.....	1	1	.....	18	.....	.....	.....	.....	.....	77
Psychosis, manic depressive (Class XI, Inter. 68).....	S. and Y.	.....	11	4	4	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	44
	H.	.....	1	6	26	.....	6	.....	.....	8	.....	.....	.....	6	.....	946
	T.	.....	1	46	37	.....	7	1	3	26	2	.....	.....	7	.....	1,067
Psychosis, traumatic (Class XI, Inter. 68).....	F. A.	.....	7	1	.....	.....	.....	.....	3	4	.....	.....	.....	.....	.....	63
	S. and Y.	.....	4	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	21
	H.	.....	8	12	1	9	.....	.....	10	.....	9	.....	.....	4	.....	2,266
Psychosis, traumatic (Class XI, Inter. 68).....	T.	.....	8	23	2	9	.....	1	13	6	10	.....	.....	.....	.....	2,340
	F. A.	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	5
	H.	.....	1	2	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	88
Pterygium (Class VI, Inter. 76C).....	T.	.....	2	2	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	96
	F. A.	29	4	6	25	44
	S. and Y.	13	1	8	6	51
Pterygium (Class VI, Inter. 76C).....	H.	2	3	33	1	2
	T.	2	45	47	1	31	1,171

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.	
		Rem.	A.	RA.	D.	C.	Dsd.	DD.	IS.	H.	HL.	HT.	L.	T.				
Rheumatic fever, subacute (Class VIII, Inter. 47)...	F. A.....	1	46	14	42												1	669
	S. and Y.		12	7	14		1			13						2	331	
	H.....	7	2	20	16	3	1			4					7	2	967	
	T.....	8	60	41	72	4	1										3	1,967
Rheumatism, chronic articular (Class XVII, Inter. 48B).	F. A.....	1	65	13	33	3				4	36				5		3	876
	S. and Y.	1	25	13	21	1				1	15				1		1	471
	H.....	10	12	60	41	10	1								16		14	3,920
	T.....	12	102	91	95	14	1				5	51					22	17	5,267
Rheumatism, muscular (Class XVII, Inter. 149).....	F. A.....	1	177	22	144	2				5	46				2		1	1,260
	S. and Y.	2	69	7	47					2	28				1		1	460
	H.....	5	17	83	51	33	1								11		9	3,533
	T.....	8	263	112	242	35	1			7	74						14	10	5,263
Rhinitis, acute (Class XIV, Inter. 86).....	F. A.....		22		22													70
	S. and Y.		31		29						1						1	111
	H.....		1	3	8	1												26
	T.....		54	3	54	1					1						1	207
Rhinitis, atrophic (Class XIV, Inter. 86).....	F. A.....		1								1							0
	S. and Y.		1		1													0
	H.....		1	1	2												1	125
	T.....		1	3	1	3					1				1			125
Rhinitis, hypertrophic (Class XIV, Inter. 86).....	F. A.....		25	1	16	1					9							64
	S. and Y.		7		1						6							17
	H.....		3	16	17	4				1								566
	T.....		3	35	34	5				1	15							647
Rickets (Class XVII, Inter. 36C).....	S. and Y.		1							1								3
	F. A.....		1															0
Rupture of heart, spontaneous (Class II, Inter. 76C).....																		

Sarcoma (Class XIX, Inter. 39-45)	F. A. S. and Y. H.	2	1 2	5	3	2	2	2	2	1 2	1 1	1	1	1	14 0
	T.	2	4	5	3	2	2	2	2	2	2	1	1	1	321
Scabies (Class XVIII, Inter. 145B)	F. A. S. and Y. H.	2 13	204 23	9 167	129 154	40 22	1 3	1 3	1 3	1 3	83 73	1 4	1 20	1 5,461	814
	T.	15	334	183	323	23	3	3	3	1	156	5	21	6,774	618
Scarlet fever (Class VIII, Inter. 7)	F. A. S. and Y. H.	2 8	22 6	2 27	4 30	4 5	1 5	1 5	1 5	1 3	20 3	2	1	150	823
	T.	5	36	30	40	5	5	5	5	23	23	2	2	1	1,561
Schistosomiasis, intestinal (Class XVIII, Inter. 107)	F. A. S. and Y. H.	1	7	1	1	1	1	1	1	1	1	8	8	8	277
	T.	8	8	1	1	1	1	1	1	1	1	8	8	8	34
Scleritis (Class VI, Inter. 75C)	F. A. S. and Y. H.	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	2 0	2 0	2 26	2
	T.	1	2	2	2	2	2	2	2	1	1	2	2	2	27
Sclerosis, amphotrophic lateral (Class XIII, Inter. 63)	F. A. S. and Y. H.	1	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	2 42	2 42	2 42	2
	T.	1	3	3	3	3	3	3	3	1	1	2	2	2	44
Sclerosis, disseminated (Class XIII, Inter. 63)	F. A. S. and Y. H.	2	2	2	2	2	2	2	2	1 1	1 1	2	2	2	1
	T.	2	2	2	2	2	2	2	2	2	2	2	2	2	277
Sclerosis, lateral (Class XIII, Inter. 63)	S. and Y. H.	1	1	1	1	1	1	1	1	1	1	10	10	10	8
	T.	1	1	1	1	1	1	1	1	1	1	18	18	18	1
Seborrhea (Class XV, Inter. 145C)	S. and Y.	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sentility (Class XVII, Inter. 154B)	F. A. S. and Y. H.	2 1	2 1	2 1	2 1	2 1	2 1	2 1	2 1	2 1	2 1	2 1	2 1	2 1	2 1
	T.	3	3	3	3	3	3	3	3	3	3	3	3	3	3

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.								Cont.	Days.
		Rem.	A.	RA.	D.	C.	Dsd.	DD.	IS.	H.	HI.	HT.	L.	T.	
Septicæmia (Class VIII, Inter. 20).....	F. A. S. and Y. H.....	..... ..... .....	6 1 2	5 1 1	3 1 1	1 ..... .....	..... ..... .....	2 ..... .....	..... ..... .....	1 ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	4 ..... .....	..... 218 21 14
Shock (Class XVII, Inter. 189A).....	T.....	.....	9	6	5	1	.....	4	.....	1	.....	.....	.....	4	253
Shock (Class XVII, Inter. 189A).....	S. and Y.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Sinus (Class XVII, Inter. 145C).....	F. A. S. and Y. H.....	..... ..... .....	6 1 3	3 9 9	3 1 6	..... ..... 2	..... ..... .....	..... ..... .....	..... ..... .....	5 ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... 19 260 908
Sinusitis, frontal (Class XIV, Inter. 146).....	T.....	.....	10	12	10	2	.....	.....	.....	5	.....	.....	1	1	1,187
Sinusitis, frontal (Class XIV, Inter. 146).....	F. A. S. and Y. H.....	..... ..... .....	10 11 2	1 3 9	5 10 10	..... ..... 1	..... ..... .....	..... ..... .....	..... ..... .....	6 3 .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... 25 68 485
Sinusitis, maxillary (Class XIV, Inter. 146).....	T.....	.....	2	23	13	25	1	1	.....	9	.....	.....	.....	1	588
Sinusitis, maxillary (Class XIV, Inter. 146).....	F. A. S. and Y. H.....	..... ..... .....	1 2 1	6 1	3 2	..... ..... 1	..... ..... .....	..... ..... .....	..... ..... .....	3 ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... 13 34 31
Smallpox (Class VIII, Inter. 5).....	T.....	.....	1	8	2	6	1	.....	.....	3	.....	.....	.....	.....	78
Smallpox (Class VIII, Inter. 5).....	F. A. S. and Y. H.....	..... ..... .....	30 8 1	4 35 6	2 3 4	..... 12 2	..... ..... .....	..... 3 .....	..... ..... .....	2 1 .....	..... ..... .....	..... ..... .....	..... ..... .....	..... 27 23 .....	..... 189 387 95
Somnambulism (Class XIII, Inter. 74).....	T.....	.....	1	28	44	9	14	.....	.....	3	.....	.....	.....	27	681
Somnambulism (Class XIII, Inter. 74).....	F. A. S. and Y. H.....	..... ..... .....	8 1	2	2 ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	2 ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... 18 61
Splanchnoptosis (Class III, Inter. 110B).....	T.....	.....	4	4	4	2	.....	.....	.....	2	.....	.....	.....	1	70
Splanchnoptosis (Class III, Inter. 110B).....	H.....	1	22
Sprue (Class III, Inter. 110B).....	F. A.	1	1	2

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.								Cont.	Days.	
		Rem.	A.	R.A.	D.	C.	Ded.	DD.	IS.	H.	HT.	L.	T.			
Tachycardia (Class II, Inter. 85).....	F. A.....		8	4	2											27
	S. and Y.....		3						3	7						7
	H.....		3	7	3				1					2		155
	T.....		14	11	5	4			7	7			2			189
Tallipes (Class XII, Inter. 149).....	S. and Y.....		1	1					1						1	13
	H.....			1												134
	T.....		1	2					1				1			147
	F. A.....		20	3	20											62
Tentacles (Class XVIII, Inter. 107).....	S. and Y.....		15	1	14				1	3						37
	H.....	1	3	5	9					2						134
	T.....	1	38	9	43					5						233
	F. A.....		18		17					1						134
Tenesynovitis (Class XII, Inter. 149).....	S. and Y.....		2		1				3	1						3
	H.....		2	2	3									1		200
	T.....		22	2	21					2						337
	F. A.....		1		1											0
Teratoma (Class XIX, Inter. 46).....	S. and Y.....		1		1											76
	H.....		1													1
	T.....		2		1				1							77
	F. A.....		1	1					1	1						2
Thrombosis (Class II, Inter. 82).....	S. and Y.....															71
	H.....		1													76
	T.....		2		1											77
	F. A.....		1	1					1	1						2
Thyroiditis, chronic (Class IV, Inter. 88).....	S. and Y.....															71
	H.....															76
	T.....		1	3		1			1	1			1			73
	F. A.....								1							1
T ₁ %, convulsive (Class XIII, Inter. 74).....	S. and Y.....		2						2	2						91
	H.....	1		5	2	3							1			91
	T.....	1	2	6	2	8			1	2			1			98
	F. A.....															0

Tonsillitis, acute follicular (Class III, Inter. 100).....	F. A. S. and Y. H.....	21 3 8	2,022 666 48	59 24 190	1,940 607 186	15 4 52	1	122 71	12 10 1	12 10 1	7,998 2,735 3,075
Tonsillitis, chronic (Class III, Inter. 100).....	T.....	32	2,736	273	2,733	71	1	194	14	28	13,835
Tracheitis (Class XIV, Inter. 80).....	F. A. S. and Y. H.....	1 6	68 16 6	7 3 34	43 12 26	11 11 11	1	21 4 25	1 1 2	1 10 11	227 50 977
Trachoma (Class VI, Inter. 75B).....	T.....	7	79	44	80	12	1	25	2	11	1,284
Trichophytosis (Class XVIII, Inter. 145A).....	F. A. S. and Y. H.....	1 2	1 1	1 1	1 1	1 1	1	1	1	1	4 4 8
Trichophytosis (Class XVIII, Inter. 145A).....	T.....	4 4	4 4	1 5	2 2	2 2	1 3	4 1 1	1 1 1	1 1 1	26 50 178
Trichophytosis (Class XVIII, Inter. 145A).....	T.....	8	6	2	2	2	4	5	1	1	254
Trichophytosis (Class XVIII, Inter. 145A).....	F. A. S. and Y. H.....	36 1 2	36 65 7	4 30 43	27 43 113	3 3 3	12 23 35	12 23 35	1 1 1	1 1 2	215 122 1,080
Trichuriasis (Class XVIII, Inter. 107).....	H.....	5	5	5	5	5	14	14	14	14	14
Tuberculosis, abdominal (Class VIII, Inter. 31).....	F. A. S. and Y. H.....	1 4 3	1 4 3	1 3 1	1 1 2	1 2 2	1	1 1 1	1 1 1	1 1 1	30 1 177
Tuberculosis, acute bronchopneumonic (Class VIII, Inter. 29).....	T.....	6	4	1	1	2	1	1	1	1	208
Tuberculosis, acute bronchopneumonic (Class VIII, Inter. 29).....	F. A. S. and Y. H.....	8 2 3	8 2 17	5 1 37	5 1 23	4 1 23	4 1 2	9 2 21	1 1 1	1 8 2	37 10 1,398
Tuberculosis, acute general (Class VIII, Inter. 29).....	T.....	3	27	43	23	23	2	11	21	8	1,445
Tuberculosis, acute general (Class VIII, Inter. 29).....	F. A. S. and Y. H.....	1 1	1 1	1 1	1 1	1 1	1	1	1	1	0 30 30
Tuberculosis, acute general (Class VIII, Inter. 29).....	T.....	2	2	1	1	1	1	1	1	1	30

TABLE 1.—*Detailed statement of disease and injury for the calendar year 1913—Continued.*

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.	
		Rem.	A.	R.A.	D.	C.	Ded.	DD.	IS.	H.	HT.	L.	T.					
Tuberculosis, acute pneumonic (Class VIII, Inter. 29)	F. A.	1	23	4	1				1									137
	S. and Y.	1	4	1	1												35	
	H.	4	5	54	2	20		2		23							1,162	
	T.	6	32	59	4	20		2	1	26							1,364	
Tuberculosis, acute pulmonary military (Class VIII, Inter. 26).	F. A.		2	1													49	
	S. and Y.	2	4	6		3		2		3							278	
	H.																	
	T.	2	6	7		3		2		3							327	
Tuberculosis, chronic pulmonary (Class VIII, Inter. 28).	F. A.		81	33		1		1	10	82							520	
	S. and Y.		32	13	3				1	28							737	
	H.	132	124	355	22	38	4	20	72		155	10	115			175	59,579	
	T.	132	237	401	25	39	4	21	83	110		161	10	134		183	61,136	
Tuberculosis of joint (Class VIII, Inter. 33)	F. A.			1					1								2	
	S. and Y.	2															360	
	H.																	
	T.	2		1					1								392	
Tuberculosis of pleura (Class VIII, Inter. 28)	F. A.		1							1							0	
	S. and Y.			1						4							16	
	H.																	
	T.		1	1						1							16	
Tuberculosis of spinal column (Class VIII, Inter. 32)	F. A.		1	4		1											1	
	S. and Y.	1	1														1	
	H.																	
	T.																	
Tuberculosis, unqualified (Class VIII, Inter. 34)	F. A.		10	2	1					10							217	
	S. and Y.		2	2					2	1							242	
	H.	4	3	15	7	6					2	1	2			4	1,169	
	T.	4	13	19	8	6				11							1,628	
Tuberculosis meningitis (Class VIII, Inter. 30)	F. A.		1														0	
	S. and Y.																	
	H.																	
	T.																	
Typhoid fever (Class VIII, Inter. 1)	F. A.	1	9	2	1					9							132	
	S. and Y.	1	6	4	4					4							269	
	H.	4	7	22	16	8		4								1	1,226	
	T.	6	23	26	23	8		4		13							1,057	

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Dea.	DD.	IS.	H.	HI.	HT.	L.	T.			
Undulant fever (Class VIII, Inter. 3A)	F. A.	.....	1	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	36
	H.	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	33
	T.	.....	1	2	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	74
Union of fracture, faulty (Class XII, Inter. 146)	F. A.	.....	18	9	2	1	.....	.....	11	12	.....	.....	.....	1	.....	.....	148
	S. and Y.	.....	9	5	5	.....	.....	.....	7	5	.....	.....	.....	.....	.....	.....	165
	H.	3	4	20	8	3	.....	.....	.....	.....	.....	.....	1	11	4	.....	890
Ureteral colic (Class VII, Inter. 123)	T.	.....	3	31	34	11	4	.....	18	17	.....	.....	1	12	5	.....	1,173
	F. A.	.....	4	1	3	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	19
	S. and Y.	.....	4	1	4	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	53
Urethritis, acute (Class VII, Inter. 125)	H.	.....	.....	4	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	109
	T.	.....	8	6	8	1	.....	.....	.....	3	.....	.....	1	.....	.....	.....	133
	F. A.	.....	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0
Urethritis, chronic (Class VII, Inter. 125)	S. and Y.	.....	6	.....	5	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	37
	H.	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	55
	T.	.....	12	1	11	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	92
Urticaria (Class XV, Inter. 145C)	F. A.	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0
	S. and Y.	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	0
	H.	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14
Vaccinia (Class VIII, Inter. 19)	T.	.....	2	1	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	14
	F. A.	.....	20	2	19	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	63
	S. and Y.	.....	7	.....	5	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	18
Vaccinia (Class VIII, Inter. 19)	H.	.....	1	6	6	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44
	T.	.....	28	8	30	1	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	126
	F. A.	.....	80	1	76	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	376
Vaccinia (Class VIII, Inter. 19)	S. and Y.	.....	1	76	1	.....	.....	.....	.....	13	.....	.....	.....	.....	.....	.....	311
	H.	.....	1	17	10	7	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	270
	T.	1	137	19	151	7	1	.....	.....	15	.....	.....	.....	.....	.....	.....	937

Valvular disease, chronic cardiac (Class II, Inter. 79A).....	F. A.	1	98	31	10	.....	2	77	30	.....	9	2	719
	S. and Y.	1	16	12	4	.....	3	17	6	.....	31	4	336
	H.	1	19	47	11	12	.....	5	.....	.....	1	.....	1,971
	T.	2	133	90	25	12	.....	5	99	36	1	41	6
Varicose (Class VII, Inter. 83).....	F. A.	117	55	52	8	.....	.....	1	66	.....	.....	.....	720
	S. and Y.	55	5	8	.....	.....	.....	3	49	.....	.....	.....	207
	H.	4	21	116	120	6	.....	.....	.....	.....	4	11	4,041
	T.	4	193	123	180	6	.....	4	415	.....	4	11	4,968
Varix (Class II, Inter. 83).....	F. A.	1	42	5	8	.....	.....	1	38	.....	1	.....	106
	S. and Y.	22	10	8	.....	.....	.....	4	19	.....	1	.....	221
	H.	9	6	64	59	6	2	.....	.....	.....	4	7	3,041
	T.	10	70	79	75	6	2	5	57	.....	1	6	7
Verruca peruana (Class VIII, Inter. 55).....	F. A.	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	12
Vertigo (Class XVII, Inter. 189A).....	F. A.	7	5	6	.....	.....	.....	1	4	.....	1	.....	47
	S. and Y.	5	1	4	.....	.....	.....	.....	2	.....	.....	.....	19
	H. ....	.....	6	6	2	3	.....	.....	.....	.....	1	.....	179
	T. ....	.....	12	12	12	3	.....	1	6	.....	2	.....	245
Vomiting, recurrent (Class III, Inter. 103).....	S. and Y.	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	8
Wart (Class XV, Inter. 145C).....	F. A.	2	16	1	16	.....	.....	.....	3	.....	.....	.....	69
	S. and Y.	12	12	1	8	.....	.....	.....	5	.....	.....	.....	110
	H.	1	3	8	9	1	.....	.....	.....	.....	.....	2	290
	T.	3	31	10	33	1	.....	.....	8	.....	.....	2	389
Yaws (Class VIII, Inter. 19).....	F. A.	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	23
	S. and Y.	12	12	12	.....	.....	.....	.....	.....	.....	.....	.....	62
	T.	14	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	85
Zoster (Class XIII, Inter. 145C).....	F. A.	11	.....	9	.....	.....	.....	.....	1	.....	.....	1	28
	S. and Y.	5	5	5	.....	.....	.....	.....	.....	.....	.....	.....	45
	T.	16	.....	14	.....	.....	.....	.....	1	.....	.....	1	73
INJURY.													
Abrasion, unqualified "G" (Class XX, Inter. 186).....	F. A.	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	21
	S. and Y.	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1
	T.	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	22
Abrasion, unqualified "H" (Class XX, Inter. 186).....	F. A.	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	9

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—			Disposition.								Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Desd.	DD.	IS.	H.	HI.	LT.		
Abrasion, unqualified "J" (Class XX, Inter. 186)	F. A.	.....	3	.....	2	.....	.....	.....	.....	1	.....	.....	.....	8
	S. and Y.	.....	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	28
	H.	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	71
Abrasion, unqualified "L" (Class XX, Inter. 186)	T.	.....	7	1	7	.....	.....	.....	.....	1	.....	.....	.....	107
	F. A.	1	22	.....	21	.....	.....	.....	.....	1	.....	.....	1	126
	S. and Y.	1	21	1	23	1	.....	.....	.....	1	.....	.....	.....	191
Abrasion, multiple "G" (Class XX, Inter. 186)	H.	.....	2	2	3	.....	.....	.....	.....	.....	.....	.....	.....	170
	T.	.....	45	3	46	1	.....	.....	.....	2	.....	.....	1	447
	S. and Y.	.....	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	17
Abrasion, multiple "I" (Class XX, Inter. 186)	F. A.	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	11
	H.	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	9
	F. A.	.....	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	66
Abrasion, multiple "J" (Class XX, Inter. 186)	S. and Y.	.....	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	60
	T.	.....	11	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	106
	S. and Y.	.....	1	1	1	.....	.....	.....	.....	1	.....	.....	.....	19
Avulsion of limb "H" (Class XX, Inter. 186)	H.	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	15
	T.	.....	1	2	1	.....	.....	.....	.....	1	.....	1	.....	34
	F. A.	.....	4	1	3	.....	.....	.....	.....	1	.....	.....	.....	42
Avulsion, unqualified "H" (Class XX, Inter. 186)	H.	1	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	54
	T.	.....	1	4	4	.....	.....	.....	.....	1	.....	.....	.....	96
	F. A.	.....	3	.....	3	.....	.....	.....	.....	1	.....	.....	.....	24
Avulsion, unqualified "I" (Class XX, Inter. 186)	F. A.	.....	1	.....	1	.....	.....	.....	.....	1	.....	.....	.....	3
	H.	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	63
	T.	.....	1	1	1	.....	.....	.....	.....	1	.....	.....	.....	65
Avulsion, unqualified "L" (Class XX, Inter. 186)	F. A.	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	0
	T.	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	F. A.	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....

Burn "C" (Class XX, Inter. 167).....	F. A. H.	8	1	5	4	71
		2	2			201
	T.	8	3	7	4	272
	F. A.	1			1	1
Burn "D" (Class XX, Inter. 167).....	F. A.	30	1	28	4	213
Burn "F" (Class XX, Inter. 167).....	S. and Y. H.	5	2	6		25
		2	2	2		33
	T.	2	35	35	4	271
	F. A.	1		1		2
Burn "G" (Class XX, Inter. 167).....	F. A.	80		81		83
Burn "L" (Class XX, Inter. 167).....	S. and Y. H.	1	11	10	5	183
		1	1	1	2	330
	T.	2	106	11	7	1,336
	F. A.	1		1		11
Burns, multiple "A" (Class XX, Inter. 167).....	F. A.	2		2		51
Burns, multiple "C" (Class XX, Inter. 167).....	S. and Y. T.	1		1		42
		3		3		98
Burns, multiple "F" (Class XX, Inter. 167).....	F. A. S. and Y. H.	34		18	8	202
		2	11	5	2	12
	T.	36	11	23	10	363
	F. A.	2		2		667
Burns, multiple "G" (Class XX, Inter. 167).....	F. A.	34	1	30	1	29
Burns, multiple "L" (Class XX, Inter. 167).....	S. and Y. H.	10	10	10	4	271
		1	3	2		87
	T.	45	4	42	1	96
	F. A.	2			1	454
Compression of chest "I" (Class XX, Inter. 186).....	F. A.	4		4		1
Contusion "E" (Class XX, Inter. 186).....	F. A.	1		1		22
Contusion "F" (Class XX, Inter. 186).....	S. and Y. T.	1		1		3
		2		2		4
						7

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—					Disposition.								Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Ded.	DD.	IS.	H.	HL.	HT.	L.	T.		
Contusion "G" (Class XX, Inter. 186)	F. A.	2	145	10	130									4	2	1,087
	S. and Y.		40	1	22				1	20						316
	H.	3	5	27	24	7				9				2	2	1,370
	T.	5	190	38	186	7			1	29				6	4	2,772
Contusion "H" (Class XX, Inter. 186)	F. A.		23	1	21					3						100
	S. and Y.		8		7					1						42
	H.	1		3	3	1										117
	T.	1	31	4	31	1				4						259
Contusion "I" (Class XX, Inter. 186)	F. A.	6	89	2	91	1				5						843
	S. and Y.		13		11	1			1							99
	H.		1	7	7	1										168
	T.	6	103	9	109	3			1	5						1,110
Contusion "J" (Class XX, Inter. 186)	F. A.		37	1	34					4						207
	S. and Y.		43		36					7						183
	H.	2	4	13	14	3								1	1	355
	T.	2	84	14	84	3				11				1	1	715
Contusion "L" (Class XX, Inter. 186)	F. A.	1	229	2	218	1			1	9				2	2	1,008
	S. and Y.		57	13	54					6					2	430
	H.	3			12	7								1	1	600
	T.	5	236	25	264	8			1	15				3	5	2,094
Contusions, multiple "Q" (Class XX, Inter. 186)	F. A.		10	1	5	1				4						60
	S. and Y.		5		2					2					1	49
	H.			8	6	1								1	2	197
	T.		17	9	13	2				0					4	306
Contusions, multiple "H" (Class XX, Inter. 186)	F. A.		3		3											45
	S. and Y.		1							1						0
	H.			1	1											14
	T.		4	1	4					1						60

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Decd.	DD.	IS.	H.	HI.	HT.	L.	T.			
Dislocation of clavicle "L" (Class XX, Inter. 185A.)	F. A.		1											1		0	
	S. and Y.		1													0	
	H.	1		3	3	1				1						104	
	T.	1	2	3	3	1				1				1		104	
Dislocation of elbow "E" (Class XX, Inter. 185A.)	S. and Y.		1													0	
	F. A.	1	7		4					3					1	64	
	H.			4	2	2										138	
	T.	1	7	4	6	2				3					1	202	
Dislocation of elbow "H" (Class XX, Inter. 185A.)	F. A.		1							1						0	
	F. A.		2		1										1	52	
	H.			1	1											34	
	T.		2	1	2										1	86	
Dislocation of hip "G" (Class XX, Inter. 185A.)	S. and Y.		1							1						17	
	H.			2		1									1	205	
	T.		1	2		1									1	222	
	F. A.		3	2	2	1				2						95	
Dislocation of intra-articular cartilage of joint "G" (Class XX, Inter. 185A.)	S. and Y.		2		1					1						12	
	H.	4		5	4	1	1							2	1	267	
	T.	4	5	7	7	2	1			3					1	345	
	F. A.		2		1					1				2	1	8	
Dislocation of intra-articular cartilage of joint "J" (Class XX, Inter. 185A.)	S. and Y.		1		1					1						0	
	H.		1	1	1											116	
	T.		4	1	2	1				2						124	
	F. A.		2	2	1					1						26	
Dislocation of intra-articular cartilage of joint "L" (Class XX, Inter. 185A.)	S. and Y.				4	1										188	
	H.	3		2	4	1										276	
	T.	4	2	4	6	1				1						456	

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Dsd.	DD.	IS.	H.	HI.	HT.	L.	T.			
Electric shock, injury from "H" (Class XX, Inter. 181)	H.....		1					1									0
Electric shock, injury from "L" (Class XX, Inter. 181)	F. A.....		1		1												5
Epiphyseal separation "G" (Class XX, Inter. 186C).	F. A.....		1	2						1				1			0
	H.....				1												75
	T.....		1	2	1					1				1			75
Exhaustion from overexertion and exposure "D" (Class XX, Inter. 177A).	F. A.....		1		1												4
Exhaustion from overexertion and exposure "L" (Class XX, Inter. 177A).	F. A.....		2		2												4
	S. and Y.		1		1												7
	H.....		1		1												3
	T.....		4		4												14
Foreign body, traumatic "B" (Class XX, Inter. 186).	S. and Y.		1		1												3
Foreign body, traumatic "E" (Class XX, Inter. 186).	F. A.....			2					1	1				1			1
	H.....			1													93
	T.....			3						1				1			94
Foreign body, traumatic "G" (Class XX, Inter. 186).	F. A.....		2		2												4
Foreign body, traumatic "H" (Class XX, Inter. 186).	F. A.....		9		9												21
Foreign body, traumatic "L" (Class XX, Inter. 186).	F. A.....		32		27					5							138
	S. and Y.		9		7				1	1							60
	H.....	2		6	8												249
	T.....	2	41	6	42				1	6							456
Fracture about ankle joint, compound "I" (Class XX, Inter. 186C).	F. A.....		1	1										1			96
	S. and Y.																91
	T.....		2	1										1		2	187

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—			Disposition.										Cont.	Days.
		Rem.	A.	RA.	D.	C.	Dsd.	DD.	IS.	H.	HL.	HT.	L.	T.		
Fracture of clavicle, simple "E" (Class XX, Inter. 185C).	F. A.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12
Fracture of clavicle, simple "G" (Class XX, Inter. 185C).	F. A..... S. and Y..... H.....	..... ..... .....	7 4 1	1 11	..... ..... 8	..... ..... 2	..... ..... .....	..... ..... .....	..... ..... .....	8 4 .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... 3	4 2 407
Fracture of clavicle, simple "J" (Class XX, Inter. 185C).	T.....	1	12	12	8	2	.....	.....	.....	12	.....	.....	.....	.....	3	413
Fracture of clavicle, simple "L" (Class XX, Inter. 185C).	F. A..... S. and Y..... H.....	1	2 3 1	..... ..... 5	1 5	..... ..... 1	..... ..... .....	..... ..... .....	..... ..... .....	2 3 .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... 1	12 2 302
Fracture of clavicle, simple "L" (Class XX, Inter. 185C).	T.....	2	6	5	6	1	.....	.....	.....	5	.....	.....	.....	.....	1	316
Fracture of clavicle, simple "L" (Class XX, Inter. 185C).	F. A..... S. and Y..... H.....	..... ..... .....	5 1	..... ..... 3	3 2	..... ..... 2	..... ..... .....	..... ..... .....	..... ..... .....	2 ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	101 21 182
Fracture of femur, compound "G" (Class XX, Inter. 185C).	T.....	1	6	3	6	2	.....	.....	.....	2	.....	.....	.....	.....	.....	304
Fracture of femur, compound "G" (Class XX, Inter. 185C).	H.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	61
Fracture of femur, compound "H" (Class XX, Inter. 185C).	S. and Y..... H.....	..... .....	..... .....	1 .....	..... 1	..... .....	..... .....	..... .....	1 .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	0 40
Fracture of femur, compound "I" (Class XX, Inter. 185C).	T.....	.....	.....	2	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	40
Fracture of femur, compound "I" (Class XX, Inter. 185C).	H.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	0
Fracture of femur, compound "L" (Class XX, Inter. 185C).	S. and Y.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	132
Fracture of femur, simple "G" (Class XX, Inter. 185C).	F. A..... S. and Y..... H.....	3 1 1 1 4 2 2 3	3 1 1	3 50 366
Fracture of femur, simple "G" (Class XX, Inter. 185C).	T.....	1	5	5	3	3	4	1	419

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TABLE '1'.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—			Disposition.										Cont.	Days.
		Rem.	A.	RA.	D.	C.	Ded.	DD.	IS.	H.	HI.	HT.	L.	T.		
Fracture of humerus, compound "L" (Class XX, Inter. 186C).	F. A.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	0
Fracture of humerus, simple "G" (Class XX, Inter. 186C).	F. A..... H.....	.....	2	1 6	1	1	.....	.....	1	2	.....	.....	.....	2	2	315
.....	T.....	.....	2	7	1	1	.....	.....	1	2	.....	.....	.....	2	2	320
Fracture of humerus, simple "I" (Class XX, Inter. 186C).	F. A.....	.....	2	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	45
Fracture of humerus, simple "J" (Class XX, Inter. 186C).	F. A..... S. and Y. H.....	.....	3	1 3	1 1	.....	.....	.....	.....	2	.....	.....	.....	1	.....	1 68 271
.....	T.....	.....	3	4	2	.....	.....	.....	.....	2	.....	.....	.....	1	2	340
Fracture of humerus, simple "L" (Class XX, Inter. 186C).	F. A..... S. and Y. H.....	.....	1 3	..... 3	..... 2	.....	.....	.....	.....	1 3	.....	.....	.....	.....	.....	0 2 129
.....	T.....	.....	4	4	2	.....	.....	.....	1	4	.....	.....	.....	1	.....	131
Fracture of leg, compound "G" (Class XX, Inter. 186C).	F. A..... H.....	.....	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	0 271
.....	T.....	.....	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	271
Fracture of leg, compound "H" (Class XX, Inter. 186C).	F. A..... H.....	.....	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	0 71
.....	T.....	1	1	1	1	71
Fracture of leg, compound "I" (Class XX, Inter. 186C).	F. A..... S. and Y. H.....	1	1	1	2 12
.....	T.....	1	1	1	1	14

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.									Cand.	Days.	
		Rem.	A.	RA.	D.	C.	Dsd.	DD.	IS.	H.	HI.	HT.	L.	T.			
Fracture of maxilla inferior, simple "H" (Class XX, Inter. 185C).	F. A.....		1														7
	H.....			1						1							19
	T.....		1	1	1					1							26
	S. and Y.		1		1												26
Fracture of maxilla inferior, simple "J" (Class XX, Inter. 185C).	F. A.....		19		7					12							239
	S. and Y.	1	3		2					2							19
	H.....	5		18	15	3								2	3		724
	T.....	0	22	18	24	3				14				2	3		932
Fracture of patella, simple "G" (Class XX, Inter. 185C).	F. A.....		1													1	26
	F. A.....		1														9
	S. and Y.			1	1					1							12
	H.....			1	1												91
Fracture of rib, simple "G" (Class XX, Inter. 185C).	T.....		1	2	2					1							104
	F. A.....		14		12					2							179
	S. and Y.	1	3	1	3					2							54
	H.....	1		4	5												179
Fracture of rib, simple "H" (Class XX, Inter. 185C).	T.....	2	17	5	20					4							412
	F. A.....		1		1												8
	S. and Y.		1		1												20
	F. A.....		1		1												7
Fracture of rib, simple "J" (Class XX, Inter. 185C).	F. A.....		3		1					2							1
	S. and Y.			2	1												83
	H.....																
	T.....		3	2	2					2						1	95

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—					Disposition.										Cont.	Days.
		Rem.	A.	RA.	D.	C.	Dsd.	DD.	IS.	H.	HL.	HT.	L.	T.				
Fracture of vertebra, simple "E" (Class XX, Inter. 186C).	F. A.....		1							1							0	
Fracture of vertebra, simple "G" (Class XX, Inter. 186C).	F. A..... S. and Y. H.....	2 1 1		1 1	1 1			2 1									0 33 59	
	T.....		4	1	2			3									92	
Fracture of vertebra, simple "H" (Class XX, Inter. 186C).	F. A..... H.....	1	1	1	1					1							3 48	
	T.....		1	1	1					1							51	
Fracture of vertebra, simple "I" (Class XX, Inter. 186C).	F. A..... H.....	1	1	1		1				1							0 80	
	T.....		1	1	1					1							80	
Fracture of vertebra, simple "J" (Class XX, Inter. 186C).	S. and Y.		1					1									1	
Fracture of vertebra, simple "L" (Class XX, Inter. 186C).	F. A..... S. and Y. H.....	1 1 3		1 3						2							5 3 127	
	T.....		1	5		1			1	2				2			135	
Fracture, unqualified, compound "E" (Class XX, Inter. 186C).	F. A.....		1		1												9	
Fracture, unqualified, compound "G" (Class XX, Inter. 186C).	S. and Y. H.....	1		1	1												1 73	
	T.....		1	1	1									1			74	
Fracture, unqualified, compound "H" (Class XX, Inter. 186C).	F. A..... S. and Y. H.....	11 1		1 3	7 1				1	3				1			155 95 216	
	T.....	1	11	6	9	1	1	1	1	3				3			490	

Inter. 185C).	N. and Y. H.....	1	1	4	1	1	.....	1	.....	1	2	257
	T.....	3	17	4	13	1	.....	6	.....	1	3	541
Fracture, unqualified, compound "J" (Class XX, Inter. 186C).	F. A..... S. and Y. H.....	6 3 1	..... 1 1	5 3 2	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	44 7 59
	T.....	10	2	10	.....	.....	.....	1	.....	1	.....	110
Fracture, unqualified, compound "L" (Class XX, Inter. 186C).	F. A..... S. and Y. H.....	13 1 1	..... 3 6	10 3 5	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	132 2 571
	T.....	1	17	6	18	.....	.....	4	.....	2	.....	727
Fracture, unqualified, simple "E" (Class XX, Inter. 186C).	F. A.....	3	.....	2	.....	.....	.....	.....	.....	1	.....	50
Fracture, unqualified, simple "G" (Class XX, Inter. 186C).	F. A..... S. and Y. H.....	2 1	33 4 1	2 8 8	26 3 8	1	.....	10 1 .....	.....	.....	.....	528 24 400
	T.....	3	38	10	37	.....	.....	11	.....	2	.....	932
Fracture, unqualified, simple "H" (Class XX, Inter. 186C).	F. A..... S. and Y. H.....	1 1	11 1	2 5	9 4	.....	.....	3 1	.....	1	.....	217 0 152
	T.....	1	13	7	13	1	.....	4	.....	1	2	369
Fracture, unqualified, simple "I" (Class XX, Inter. 186C).	F. A..... S. and Y. H.....	1 5 3	33 5	1 4 4	28 1 6	.....	.....	5 1 .....	.....	2 1 .....	.....	500 80 355
	T.....	4	38	6	38	1	.....	6	.....	3	.....	905
Fracture, unqualified, simple "J" (Class XX, Inter. 186C).	F. A..... S. and Y. H.....	..... 1	37 20 2	1 16 15	31 11 2	.....	.....	3 12 .....	.....	1	.....	309 80 449
	T.....	1	50	19	57	2	.....	15	.....	1	4	847
Fracture, unqualified, simple "L" (Class XX, Inter. 186C).	F. A..... S. and Y. H.....	4 2 2	143 31 7	3 29 32	128 1 .....	.....	.....	15 16 .....	.....	3 1 .....	.....	1,875 243 1,328
	T.....	8	181	84	175	1	1	30	.....	5	11	3,546

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.								Cont.	Days.
		Rem.	A.	RA.	D.	C.	Ded.	DD.	IS.	H.	HI.	HT.	L.	T.	
Frostbite "L" (Class XX, Inter. 178).....	S. and Y. H.....		4	1	3					1				1	27 137
	T.....		4	1	3					1				1	214
Heat cramps "L" (Class XX, Inter. 179A).....	F. A.....		61		61										111
Heat exhaustion "L" (Class XX, Inter. 179A).....	F. A. S. and Y. H.....		20 3	1 2	27 3 1				2	2					106 10 127
	T.....		33	3	31				2	2				1	243
Hematocele of tunica vaginalis "G" (Class XX, Inter. 127).....	F. A. H.....		1	1	1					1					7 125
	T.....		1	1	1					1					133
Hematoma, traumatic "E" (Class XX, Inter. 186).....	F. A.....		1		1										1
Hematoma, traumatic "L" (Class XX, Inter. 186).....	S. and Y. H.....		1		1										13
Hemorrhage into eyeball "J" (Class XX, Inter. 186).....	H.....		1		1										8
Hemorrhage into eyeball "L" (Class XX, Inter. 186).....	F. A. S. and Y. H.....		2 1		2 1					1					11 0 11
	T.....		3	1	3					1					22
	F. A.....		3		3										17
Hemorrhage under conjunctiva, traumatic "L" (Class XX, Inter. 186).....	F. A. S. and Y. H.....		11 6 1	2 2 1	6 2 7				1	6 3				1	61 19 842
Intracranial injury "G" (Class XX, Inter. 186).....	T.....		1	17	13	4	1	2	1	8				2	3 422

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—			Disposition.										Cont.	Days.
		Rem.	A.	RA.	D.	C.	Ded.	DD.	IS.	H.	HI.	HT.	L.	T.		
Frostbite "L" (Class XX, Inter. 173).....	S. and Y. H.....	.....	4	1	3	.....	.....	.....	.....	1	.....	.....	.....	1	.....	27
.....	T.....	.....	4	1	3	.....	.....	.....	.....	1	.....	.....	.....	1	.....	187
Heat cramps "L" (Class XX, Inter. 170A).....	F. A.....	.....	61	.....	61	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	214
Heat exhaustion "L" (Class XX, Inter. 170A).....	F. A.....	.....	30	1	27	.....	.....	.....	2	3	.....	.....	.....	.....	.....	111
.....	S. and Y. H.....	.....	3	2	3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	106
.....	T.....	.....	33	3	31	.....	.....	.....	2	3	.....	.....	.....	1	.....	127
Hematocele of tunica vaginalis "G" (Class XX, Inter. 127).....	F. A.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	243
.....	H.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
.....	T.....	.....	1	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	136
Hematoma, traumatic "E" (Class XX, Inter. 186).....	F. A.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	133
.....	S. and Y. H.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Hematoma, traumatic "L" (Class XX, Inter. 186).....	S. and Y. H.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13
Hemorrhage into eyeball "J" (Class XX, Inter. 186).....	H.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8
Hemorrhage into eyeball "L" (Class XX, Inter. 186).....	F. A.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
.....	S. and Y. H.....	.....	1	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	0
.....	T.....	.....	3	1	3	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	11
.....	F. A.....	.....	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22
Hemorrhage under conjunctiva, traumatic "L" (Class XX, Inter. 186).....	F. A.....	.....	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17
Intraocular injury "G" (Class XX, Inter. 186).....	F. A.....	11	2	6	1	5	1	1	61
.....	S. and Y. H.....	6	2	1	2	3	19
.....	T.....	1	12	7	1	1	2	842
.....	T.....	1	17	13	2	1	8	2	3	492

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TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Ded.	DD.	IS.	H.	HL.	HT.	L.	T.			
Rupture of muscle "H" (Class XX, Inter. 186).....	F. A.			1					1							1	
	S. and Y.		1		1											0	
	H.	1												1		63	
Rupture of muscle "J" (Class XX, Inter. 186).....	T.	1	1	1	1									1		63	
	S. and Y.		1		1											5	
	F. A.		1		1											10	
Rupture of muscle "L" (Class XX, Inter. 186).....	F. A.		5	2	4				2	1						16	
	S. and Y.		2											2		121	
	H.															137	
Rupture of tympanum, traumatic "F" (Class XX, Inter. 186).....	T.		5	4	4				2	1				2		5	
	F. A.	1	2		2									1		31	
	H.															36	
Rupture of tympanum, traumatic "J" (Class XX, Inter. 186).....	T.	1	2		2									1		0	
	F. A.		4		4											27	
	S. and Y.		2		2											27	
Rupture of tympanum, traumatic "L" (Class XX, Inter. 186).....	T.		6		6											0	
	F. A.		1		1											27	
	S. and Y.															27	
Sprain of joint "G" (Class XX, Inter. 185B).....	F. A.	6	207	6	185	3			2	28					1	1,569	
	S. and Y.	1	75	3	68					20					1	541	
	H.	5	13	50	52	6								4	6	2,108	
Sprain of joint "H" (Class XX, Inter. 185B).....	T.	12	295	59	295	9			2	48					8	4,218	
	F. A.		6		6											74	
	S. and Y.															76	
Sprain of joint "I" (Class XX, Inter. 185B).....	F. A.		9		8					1						63	
	S. and Y.		4	1	4					1					1	28	
	H.															1	
Sprain of joint "J" (Class XX, Inter. 185B).....	T.		13	2	12					2					1	106	

[illegible]

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Ded.	DD.	IS.	H.	HI.	HT.	L.	T.			
Synovitis, traumatic "G" (Class XX, Inter. 186)....	F. A.	1	26	5	23									1	2	298	
	S. and Y.		11	2	9											98	
	H.	2	1	13	8	2							1	2	3	710	
	T.	3	38	20	40	2							1	3	5	1,106	
Synovitis, traumatic "H" (Class XX, Inter. 186)....	F. A.		1	1	2											21	
Synovitis, traumatic "I" (Class XX, Inter. 186)....	F. A.		1	1						1						2	
	S. and Y.													1		126	
	H.																
	T.		1	2						1				1		127	
Synovitis, traumatic "J" (Class XX, Inter. 186)....	F. A.		13	3	12											77	
	S. and Y.		12	1	9											70	
	H.	1		8	6		1							2	1	192	
	T.	1	25	12	27			1							2	1	339
Synovitis, traumatic "L" (Class XX, Inter. 186)....	F. A.		18		16											114	
	S. and Y.		7	2	7											133	
	H.	2		7	5	1							1	1	1	542	
	T.	4	25	9	28	1							1	1	1	809	
Thermic fever "L" (Class XX, Inter. 179A)....	F. A.		5		5											24	
	S. and Y.		1													0	
	H.			1		1										9	
	T.		6	1	5	1										33	
Wound, gunshot, abdominal viscera "K" (Class XX, Inter. 170).	S. and Y.	1														121	
	T.																
Wound, gunshot (main) artery or vein "B" (Class XX, Inter. 170).	F. A.		1													0	
	T.																

[illegible]

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—			Disposition.										Cont.	Days.
		Rem.	A.	RA.	D.	C.	Dsd.	DD.	IS.	H.	HI.	HT.	L.	T.		
Wound, gunshot, neck "B" (Class XX, Inter. 170)..	H.....	1			1											21
Wound, gunshot, neck "E" (Class XX, Inter. 170)..	S. and Y.....		1					1								2
Wound, gunshot, upper limb "B" (Class XX, Inter. 170).	S. and Y.....		1		1											25
Wound, gunshot, upper limb "E" (Class XX, Inter. 170).	F. A..... S. and Y..... H.....	7 4 5	1 4 5	1 1 5	5 3 3				1 1 1	2 1 1				1 1 1	1 1 1	74 104 123
Wound, gunshot, upper limb "L" (Class XX, Inter. 170).	T.....	11		7	9	1			1	3				2	2	301
Wound, gunshot, upper limb "L" (Class XX, Inter. 170).	S. and Y.....	1								1						0
Wound, gunshot, unqualified "B" (Class XX, Inter. 170).	F. A.....	1			1											4
Wound, gunshot, unqualified "E" (Class XX, Inter. 170).	F. A..... S. and Y..... H.....	9 2 1	3 2 4	3 1 4	2 1 3	1			2	5 1				1 2	1 1	111 68 220
Wound, gunshot, unqualified "F" (Class XX, Inter. 170).	T.....	12		7	6	1			2	6				3	1	394
Wound, gunshot, unqualified "K" (Class XX, Inter. 170).	H.....			2	1									1		50
Wound, gunshot, unqualified "L" (Class XX, Inter. 170).	F. A..... S. and Y..... H.....	1 1	1 1	2 4	1 3				1	2 2						28 200 327
Wound, gunshot, unqualified "L" (Class XX, Inter. 170).	T.....	2	1	7	4				1	4					1	685
Wound, gunshot, unqualified "L" (Class XX, Inter. 170).	F. A..... S. and Y..... H.....	1 1	1 1	1 2					1	1 1						0 26 164
Wound, gunshot, unqualified "L" (Class XX, Inter. 170).	T.....	2		3	2				1	2						189

[illegible]

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—			Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Dsd.	DD.	IS.	H.	HI.	HT.	L.	T.		
Wound, incised, upper limb "G" (Class XX, Inter. 171).	F. A.....	.....	8	.....	7	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
	H.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	79 22
Wound, incised, upper limb "H" (Class XX, Inter. 171).	T.....	.....	8	1	7	.....	.....	.....	1	.....	.....	.....	.....	1	.....	101
	F. A.....	.....	10	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	122
Wound, incised, upper limb "I" (Class XX, Inter. 171).	S. and Y.....	.....	8	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	94
	T.....	.....	18	.....	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	216
Wound, incised, upper limb "J" (Class XX, Inter. 171).	F. A.....	.....	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22
	S. and Y.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8
Wound, incised, upper limb "L" (Class XX, Inter. 171).	F. A.....	.....	30	.....	37	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	292
	S. and Y.....	1	19	2	17	.....	.....	1	1	3	.....	.....	.....	.....	.....	216
Wound, incised, unqualified "A" (Class XX, Inter. 171).	H.....	.....	2	6	6	1	.....	.....	.....	.....	.....	.....	.....	1	.....	254
	T.....	.....	1	60	8	60	1	1	1	5	.....	.....	.....	1	.....	762
Wound, incised, unqualified "A" (Class XX, Inter. 171).	S. and Y.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
	H.....	.....	1	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	24
Wound, incised, unqualified "B" (Class XX, Inter. 171).	T.....	.....	2	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	31
	F. A.....	.....	7	.....	5	.....	.....	.....	1	1	.....	.....	.....	.....	.....	39
Wound, incised, unqualified "E" (Class XX, Inter. 171).	H.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18
	T.....	.....	7	1	6	.....	.....	.....	1	1	.....	.....	.....	.....	.....	57
Wound, incised, unqualified "F" (Class XX, Inter. 171).	F. A.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0
	H.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wound, incised, unqualified "F" (Class XX, Inter. 171).	F. A.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17
	H.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnoses.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Dsd.	DD.	IS.	H.	HL.	HT.	L.	T.			
Wound, lacerated, lower limb "G" (Class XX, Inter. 186).	F. A.	23	1	22	1										1	260	
	S. and Y.	2		1	1										2	12	
	H.		4		2											80	
	T.	25	5	25											3	352	
Wound, lacerated, lower limb "H" (Class XX, Inter. 186).	F. A.	1	7	7	7	1										187	
	S. and Y.	2	1	1	1										11	11	
	H.		3		1	1								1		140	
	T.	1	9	4	8	2								1		338	
Wound, lacerated, lower limb "I" (Class XX, Inter. 186).	F. A.	14			11										1	181	
	S. and Y.	2			2										24	24	
	H.		1											1	4	4	
	T.		10	1	13									1	1	209	
Wound, lacerated, lower limb "J" (Class XX, Inter. 186).	F. A.	2			2											29	
	S. and Y.	1			1										0	0	
	H.	1			1										3	3	
	T.		4		3									1		32	
Wound, lacerated, lower limb "L" (Class XX, Inter. 186).	F. A.				22											203	
	S. and Y.	1	5	1	5	1									33	33	
	H.	2	1	4	5	2										214	
	T.	3	29	5	32	3								2		450	
Wound, lacerated, neck "A" (Class XX, Inter. 186).	F. A.		1		1											13	
	S. and Y.															0	
	H.																
	T.																
Wound, lacerated, upper limb "A" (Class XX, Inter. 186).	F. A.		1													0	
	S. and Y.													1			
	H.																
	T.																
Wound, lacerated, upper limb "E" (Class XX, Inter. 186).	F. A.	3			3											80	
	S. and Y.																
	H.																
	T.																
Wound, lacerated, upper limb "F" (Class XX, Inter. 186).	F. A.	2			2											10	
	S. and Y.																
	H.																
	T.																

[illegible]

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.								Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Dsd.	DD.	IS.	H.	HI.	HT.	L.	T.	
Wound, lacerated, unqualified "I" (Class XX, Inter. 186).	F. A.	1	36	1	36					2					690
	S. and Y.		3		2										12
	H.	1		5	5										312
	T.	2	39	6	43					2					914
Wound, lacerated, unqualified "J" (Class XX, Inter. 186).	F. A.		5		5										16
	S. and Y.		8		7					1					24
	H.			2	1	1									21
	T.		13	2	13	1				1					61
Wound, lacerated, unqualified "L" (Class XX, Inter. 186).	F. A.	1	112	2	97	1			1	15					768
	S. and Y.	2	36		27					9					228
	H.		3	27	26	3								2	831
	T.	3	151	29	150	4			1	24				2	1,827
Wound, punctured, heart or pericardium "B" (Class XX, Inter. 171).	F. A.		1					1							0
Wound, punctured, lower limb "F" (Class XX, Inter. 171).	F. A.		1		1										5
Wound, punctured, lower limb "G" (Class XX, Inter. 171).	S. and Y.		1		1										2
Wound, punctured, lower limb "H" (Class XX, Inter. 171).	F. A.		1		1										48
Wound, punctured, lower limb "I" (Class XX, Inter. 171).	F. A.	3	3		2										8
Wound, punctured, lower limb "J" (Class XX, Inter. 171).	H.			1	1					1					67
Wound, punctured, lower limb "K" (Class XX, Inter. 171).	T.		3	1	3					1					76
Wound, punctured, lower limb "L" (Class XX, Inter. 171).	S. and Y.		2		2										2

Wound, punctured, lower limb "L" (Class XX, Inter. 171).	F. A. S. and Y. H.	1 6 4	25 6 4	1 4 4	24 4 4	1 1 1	1 1 1	3 1 1	190 27 166
Wound, punctured, lung "L" (Class XX, Inter. 171).	T.	1	31	5	32	2	1	2	324
Wound, punctured, neck "B" (Class XX, Inter. 171).	S. and Y.	1	1	1	1	1	1	1	7
Wound, punctured, neck "B" (Class XX, Inter. 171).	F. A.	1	1	1	1	1	1	1	0
Wound, punctured, neck "L" (Class XX, Inter. 171).	S. and Y.	1	1	2	2	1	1	1	0
Wound, punctured, neck "L" (Class XX, Inter. 171).	H.	1	1	2	2	1	1	1	21
Wound, punctured, upper limb "B" (Class XX, Inter. 171).	T.	1	1	2	2	1	1	1	21
Wound, punctured, upper limb "H" (Class XX, Inter. 171).	H.	1	1	1	1	1	1	1	143
Wound, punctured, upper limb "H" (Class XX, Inter. 171).	S. and Y.	2	2	2	2	2	2	2	2
Wound, punctured, upper limb "L" (Class XX, Inter. 171).	F. A. S. and Y. H.	16 7 1	16 7 1	1 4 3	11 6 3	5 2 1	5 2 1	1 1 1	88 23 66
Wound, punctured, unqualified "H" (Class XX, Inter. 171).	T.	1	23	5	19	1	7	2	179
Wound, punctured, unqualified "L" (Class XX, Inter. 171).	F. A.	1	1	1	2	1	1	1	11
Wound, punctured, unqualified "L" (Class XX, Inter. 171).	F. A. S. and Y. H.	1 1 1	19 1 1	1 4 3	17 3 1	3 1 1	3 1 1	1 1 1	162 0 134
Wound, punctured, unqualified "L" (Class XX, Inter. 171).	T.	1	21	4	20	1	4	1	286
Botulism "L" (Class XXI, Inter. 164).	F. A. S. and Y. H.	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 0 15
Insect sting "L" (Class XXI, Inter. 165A).	T.	1	3	3	3	3	3	3	16
	F. A. S. and Y. H.	2 2 1	2 2 1	2 2 1	2 2 1	2 2 1	2 2 1	2 2 1	17 6 9
	T.	5	5	1	5	1	1	1	32

POISON.

TABLE 1.—Detailed statement of disease and injury for the calendar year 1913—Continued.

Diagnosis.	Place.	Taken up as—				Disposition.										Cont.	Days.
		Rem.	A.	R.A.	D.	C.	Ded.	DD.	IS.	H.	HL.	HT.	L.	T.			
Poisoning by alcohol "L" (Class XXI, Inter. 58 B)...	F. A.....	1	151	13	121												
	S. and Y.	1	68	8	44												
	H.....	5	9	76	68	17		1									
	T.....	7	228	97	233	17		4	2	67					6	3	1,059
Poisoning by chloroform anesthesia "L" (Class XXI, Inter. 168 B)	S. and Y.			1	1												
	H.....		1	1									1				
	T.....		1	2	1								1	1			
	F. A.....		1					1									0
Poisoning by ether anesthesia "L" (Class XXI, Inter. 168 B)	F. A.....		13		12												
	S. and Y.		2		1												
	H.....		1	3	4												
	T.....		16	3	17					2							60
Poisoning by fish venom "L" (Class XXI, Inter. 166 A)	F. A.....		1		1												
	S. and Y.		1		1												
	H.....		2		2												
	T.....																
Poisoning by gasoline inhaled "L" (Class XXI, Inter. 168 B)	F. A.....		1		1												
	S. and Y.		1														
	H.....																
	T.....																
Poisoning by illuminating gas "A" (Class XXI, Inter. 165 B)	F. A.....		1														
	S. and Y.																
	H.....		1	2	1	1				1							
	T.....		1	2	1	1				1							
Poisoning by illuminating gas "L" (Class XXI, Inter. 165 B)	F. A.....		22	3	18	1											
	S. and Y.		7	3	2	2											
	H.....		1	4	3	2											
	T.....		25	10	23	5				5					3		387
Poisoning by lead, acute "L" (Class XXI, Inter. 160 B)	F. A.....																
	S. and Y.																
	H.....																
	T.....																

Poisoning by lead, chronic "L" (Class XXI, Inter. 57B).	F. A.	1	35	3	11	1	1	26	116
	H.	1	1	28	25	2	1	2	1,081
	T.	1	36	31	36	2	1	2	1,197
Poisoning by mercury, acute "A" (Class XXI, Inter. 165B).	F. A.	5	1	3	1	1	1	3	7
	S. and Y.	1	1	3	3	1	1	1	0
	H.	1	1	3	3	1	1	1	36
	T.	6	6	3	4	1	1	4	42
Poisoning by mercury, acute "L" (Class XXI, Inter. 165B).	F. A.	1	1	1	1	1	1	1	3
	S. and Y.	2	1	1	1	1	1	1	4
	H.	1	1	1	2	1	1	1	19
	T.	4	4	1	4	1	1	1	26
Poisoning by methyl alcohol "L" (Class XXI, Inter. 165B).	H.	1	1	1	1	1	1	1	0
Poisoning by opium, acute "A" (Class XXI, Inter. 165B).	S. and Y.	1	1	1	1	1	1	1	1
Poisoning by opium, acute "L" (Class XXI, Inter. 165B).	F. A.	1	1	1	1	1	1	1	20
Poisoning by phenol "L" (Class XXI, Inter. 165B).	F. A.	1	1	1	1	1	1	1	2
	H.	1	1	1	1	1	1	1	12
	T.	1	1	1	1	1	1	1	14
Poisoning by serum "L" (Class XXI, Inter. 165B).	F. A.	2	2	2	1	1	1	1	10
	S. and Y.	1	1	2	1	1	1	1	3
	H.	1	1	2	1	1	1	1	18
	T.	4	4	2	3	1	1	1	31
Poisoning by snake venom "L" (Class XXI, Inter. 165A).	F. A.	1	1	1	1	1	1	1	22
	S. and Y.	1	1	1	1	1	1	1	0
	H.	1	1	1	1	1	1	1	3
	T.	2	2	1	2	1	1	1	25
Poisoning by tobacco, acute "L" (Class XXI, Inter. 165B).	F. A.	1	1	1	1	1	1	1	3
	S. and Y.	1	1	1	1	1	1	1	7
	H.	1	1	1	1	1	1	1	10
	T.	2	2	1	2	1	1	1	10

TABLE 1.—Detailed statement of disease and injury for the calendar year 1918—Continued.

Diagnosis.	Place.	Taken up as—			Disposition.								Continued to next year.	Total number of sick days.		
		Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Deserted.	Died.	Invalid from serv.	Hospital (naval).	Hospital for insane.	Hospital for tuberculous.			Block leave.	Transferred.
Poisoning by tobacco, chronic "L" (Class XXI, Inter. 59).	F. A.		1	1	1					1					0	
	S. and Y.														0	
	H.														60	
	T.		1	1	1					1					60	
Poisoning by turpentine "L" (Class XXI, Inter. 165B).	F. A.		1	1	1					1					7	
	S. and Y.		1	1	1					1					7	
	H.														0	
	T.		2	1	2					1					9	
Poisoning, unqualified "A" (Class XXI, Inter. 165B).	F. A.		4	4						4					0	
	S. and Y.		2	4	2					2					0	
	H.														121	
	T.		6	4	2	2	2			6					121	
Poisoning, unqualified "L" (Class XXI, Inter. 165B).	F. A.		23		19					4					68	
	S. and Y.		6		3					1					11	
	H.		4	7	8	1		2	1				1		116	
	T.														190	
Totals for diseases.	F. A.	146	18,887	2,728	15,376	120	4	27	599	5,014	2	2	5	410	217	92,131
	S. and Y.	140	5,070	1,240	3,772	80		20	473	2,922	6	6	7	66	173	16,036
	H.	1,156	2,280	9,540	7,072	1,987	60	90	174		64	203	86	1,430	1,217	433,961
	T.	1,422	20,237	13,608	28,820	2,202	54	146	1,246	7,936	73	216	97	1,894	1,607	554,580

Totals for injuries (wounds, etc., and poisonings).	F. A.	47	3,200	158	2,660	20	.....	58	54	517	.....	1	42	53
	S. and Y.	26	1,134	101	867	8	1	30	19	301	.....	15	22	22
	H.	112	130	904	760	122	6	18	.....	.....	.....	102	108	108
	T.	186	4,466	1,163	4,287	180	7	106	73	818	.....	6	159	178
Grand totals for diseases and injuries.	F. A.	203	22,067	2,891	18,036	140	4	85	653	5,531	.....	2	452	270
	S. and Y.	166	9,208	1,431	6,639	108	1	60	492	3,223	.....	6	81	195
	H.	1,248	2,410	10,444	8,432	2,139	56	117	174	.....	.....	64	1,522	1,320
	T.	1,637	33,703	14,766	33,107	2,382	61	252	1,319	8,754	.....	72	2,065	1,785
F. A.—Force afloat. S. and Y.—Stations and yards. H.—Hospitals and hospital ships. T.—Totals.														

SUMMARY.

Comparative rates with previous years.	For the year 1913.				Average for 10 years 1903-1912.
	Force afloat.	Stations and yards.	Hospitals.	Entire service.	
Average complement.....	42,719	21,124	2,083	65,926	46,970
Number of cases treated.....	25,181	10,803	14,122	60,106	38,662
Rate per 1,000 of complement.....	586.45	511.38	.....	700.08	800.39
Deaths.....	85	50	117	252	287
Rate per 1,000 of complement.....	1.98	2.36	.....	3.82	5.68
Invalids from service.....	653	462	174	1,319	1,433
Rate per 1,000 of complement.....	15.28	28.29	.....	20.00	31.86
Total number of sick days.....	118,883	69,021	474,186	662,090	521,924
Rate per 1,000 of complement.....	2,782.90	3,267.43	.....	10,042.92	11,606.00

TABLE 2.—Table showing distribution among occupational groups of the personnel for the calendar year 1913, by classified admissions and admission rates, deaths and death rates, invalided from service and invalided rates, suicides and suicide rates, and computed damage.

Class.	Officers.		Artificers.				Miscellaneous force.				Seaman branch.			Total.						
	Navy and ma- rine.	Mid- ship- men. (Under- grad- uate.)	Elec- tri- cians, room.	En- gine room.	Fire- room.	All oth- ers.	Cler- ical.	Cul- nary.	Hos- pital.	Ma- rines.	Mus- icians, oners.	Ap- pren- tice sea- men.	Ord- nance.	All others.	All oc- cupa- tions.	Deaths.	Inva- lided from serv- ice.	Sick days.	Total dam- age.	
Average complement.....	3,635	870	1,859	3,529	11,276	1,661	1,422	3,588	1,222	9,921	1,144	1,090	2,698	2,229	19,812	65,926				
Diseases of blood.....	1				4			2		2	1		1		4	15	3		324	2.20
Rate per 1,000.....	.27				.35			.55		.20	.87		.37		.20	.22	.04			
Diseases of circulatory system.....	19	1	4	15	48	4	4	12	8	62	4	4	59	5	60	309	15	131	9,843	99.48
Rate per 1,000.....	5.22	1.14	2.15	4.24	4.25	2.40	2.81	3.34	6.54	6.24	3.49	3.66	12.11	2.24	3.02	4.68	.22	1.98		
Diseases of digestive system.....	342	241	127	216	936	105	83	196	147	754	60	59	328	108	1,563	5,265	17	24	68,155	206.82
Rate per 1,000.....	94.08	277.01	68.31	61.27	83.00	63.21	58.36	54.62	120.29	76.00	52.44	54.12	122.93	48.45	78.89	79.85	.25	.36		
Diseases of ductless glands and spleen.....	1		3					1		4					6	23	1	6	1,017	6.08
Rate per 1,000.....	.27		1.61		.26	.60	.70			.40			1.49		.30	.34	.01	.09		
Diseases of ear.....	35	7	10	15	52	12	9	12	11	67	6		83	8	149	507	7	80	14,047	78.36
Rate per 1,000.....	9.62	8.04	3.37	4.24	7.27	7.22	6.32	3.34	9.00	6.75	5.24	.91	31.10	3.58	7.51	7.69		1.21		
Diseases of eye and annexa.....	36	29	23	23	78	17	12	20	12	71	6	1	53	13	128	526	81	81	14,007	78.83
Rate per 1,000.....	9.90	33.33	13.44	7.08	6.91	10.23	8.43	5.57	9.81	7.15	5.24	.91	19.86	5.83	6.46	7.97		1.22		
Diseases of genito-urinary system (nonvenereal).....	59	23	43	51	208	31	30	35	32	188	8		90	24	284	1,107	9	54	24,020	96.89
Rate per 1,000.....	16.23	26.43	23.12	14.45	18.44	18.66	21.09	9.75	26.18	18.94	6.99	.91	33.73	10.76	14.33	16.79	.13	.81		
Diseases of infective type (nonvenereal).....	368	166	135	210	1,014	97	92	243	142	1,397	86	43	839	102	1,669	6,003	54	101	154,608	500.71
Rate per 1,000.....	101.23	190.80	72.61	59.50	89.92	58.39	64.69	67.72	116.20	140.81	75.17	39.44	314.46	45.76	84.24	100.15	.81	1.53		
Diseases of infective type (ve- neral).....	39	6	211	371	2,198	227	146	606	79	1,809	80	14	250	222	3,176	9,434	4	134	141,378	455.93
Rate per 1,000.....	10.72	6.80	113.50	105.12	194.92	136.66	102.67	168.89	64.64	182.40	69.92	12.84	93.70	99.59	160.30	143.09	.06	2.03		
Diseases of lymphatic system.....	8		18	54	54	9	3	23	4	47	3		16	5	87	298		3	8,757	25.31
Rate per 1,000.....	2.20	11.49	4.30	5.09	4.78	5.41	2.10	6.41	3.27	4.73	2.62	2.75	5.99	2.24	4.39	4.52		.04		
Diseases of mind.....	16	1	4	8	81	10	9	14	4	39	3	10	33	6	45	285	5	123	18,458	113.89
Rate per 1,000.....	4.40	1.14	2.15	2.83	7.18	6.02	6.32	3.90	3.27	3.93	2.62	9.17	12.35	2.69	2.27	4.32	.07	1.86		
Diseases of motor system.....	23	3	13	13	106	10	6	22	16	172	4	2	59	8	125	582	7	240	20,138	175.15
Rate per 1,000.....	6.32	3.44	6.99	3.68	9.40	6.02	4.21	6.13	12.09	17.33	3.40	1.83	12.11	3.58	6.30	8.82		3.64		
Diseases of nervous system.....	54	8	11	22	89	10	7	22	7	90	9	4	22	7	92	454	7	120	20,117	121.37
Rate per 1,000.....	14.85	9.19	5.91	6.23	7.80	6.02	4.92	6.13	5.72	9.07	7.86	3.66	8.24	3.14	4.64	6.88	.10	1.91		
Diseases of respiratory system.....	129	25	37	42	164	41	24	44	40	209	21	6	233	22	350	1,303	24	49	31,202	121.74
Rate per 1,000.....	35.48	28.73	19.90	11.90	14.54	24.68	16.87	12.26	32.73	21.00	18.35	5.50	87.33	0.89	17.99	21.12	.36	.74		

Diseases of skin, hair, and nails.....	31	20	15	21	116	8	12	18	13	132	3	4	77	6	172	648	12	10,436	34.52
Rate per 1,000.....	8.52	22.98	8.06	5.95	10.28	4.81	8.43	5.01	10.63	13.30	2.62	3.66	28.85	2.69	8.68	9.82	.18	15,335	57.83
Hernia.....	12	4	5	18	65	9	6	16	6	57	3	4	39	12	96	352	32	15,335	57.83
Rate per 1,000.....	3.30	4.59	2.68	5.09	5.76	5.41	4.21	4.45	4.90	5.74	2.62	3.66	14.61	5.38	4.84	5.33	.48	15,335	57.83
Miscellaneous diseases and conditions.....	68	22	13	40	139	16	8	26	14	118	4	9	24	11	135	647	1	17,228	68.95
Rate per 1,000.....	18.70	25.28	6.99	11.33	12.32	9.63	5.62	7.24	11.45	11.88	3.49	8.25	8.99	4.93	6.81	9.81	.01	17,228	68.95
Parasites.....	11	10	17	9	81	8	18	35	9	153	23	2	91	8	224	699	1	12,527	35.63
Rate per 1,000.....	3.02	11.49	9.14	2.55	7.18	4.81	12.65	9.75	7.36	15.41	20.10	1.83	34.10	3.58	11.30	10.60	.01	12,527	35.63
Poisons.....	18	1	3	26	108	23	7	15	5	81	2	1	2	8	83	383	12	4,068	11.83
Rate per 1,000.....	4.95	1.14	1.61	7.36	9.57	13.84	4.92	4.18	4.09	8.16	1.74	.91	.74	3.58	4.18	5.30	.18	4,068	11.83
Tumors.....	2	2	.....	1	24	5	1	1	1	21	.....	.....	3	8	21	90	5	3,143	13.22
Rate per 1,000.....	.55	2.29	.....	.28	2.12	3.01	.70	.27	.81	2.11	.....	.....	1.12	3.58	1.05	1.36	.07	3,143	13.22
Wounds and other injuries.....	140	133	95	251	891	120	55	145	62	568	22	45	168	84	1,306	4,083	94	73,192	283.62
Rate per 1,000.....	38.51	152.87	51.10	71.12	70.01	72.24	35.67	40.41	50.73	57.05	19.23	41.28	62.96	37.68	65.91	61.93	1.42	73,192	283.62
All classes.....	1,412	712	779	1,374	6,489	763	533	1,507	612	6,039	348	213	2,474	667	9,781	33,703	252	1,319	662,090
Rate per 1,000.....	388.44	818.39	419.04	389.34	575.47	459.36	374.82	420.01	500.81	608.70	304.19	195.41	927.28	299.23	493.68	511.22	3.82	20.00	2,599.12
Died.....	15	8	8	20	43	9	8	14	5	39	4	1	9	13	63	252	13	13	63
Rate per 1,000.....	4.12	1.14	4.30	5.66	3.81	5.41	5.62	3.90	4.09	3.93	3.49	.91	3.37	5.83	3.17	3.82	3.17	13	63
Suicides.....	1	.....	1	.....	1	1	1	1	.....	4	.....	.....	.....	.....	4	14	.....	.....	.....
Rate per 1,000.....	.27	.....	.53	.....	.08	.60	.70	.27	.....	.40	.....	.....	.....	.....	.20	.21	.....	.....	.....
Invalided from service.....	13	.....	27	41	229	19	19	46	39	278	13	1	293	10	291	1,319	.....	.....	.....
Rate per 1,000.....	3.57	.....	14.52	11.61	20.30	11.43	13.36	12.82	31.91	28.02	11.36	.91	109.82	4.48	14.68	20.00	.....	.....	.....
Sick days.....	37,351	5,466	15,475	32,919	126,488	15,603	10,979	36,009	14,068	127,150	6,151	4,268	39,419	14,308	176,436	662,090	.....	.....	.....
Total damage.....	116.29	15.47	59.89	120.66	482.47	56.73	43.47	128.64	60.53	506.84	25.34	12.68	259.09	50.69	680.20	2,599.12	.....	.....	.....

1 Total damage is in terms of individuals whose loss of service by sickness, discharge from service, or death would be represented as continuous throughout the year.

II. FINANCIAL.

TABLE No. 3.—Statement of total cost of maintenance and of average cost per diem for maintenance and subsistence at naval hospitals for the fiscal year 1914.

Hospital at—	Total cost of maintenance.	Subsistence.	Maintenance per diem.	Subsistence per diem.
		<i>Depts.</i>		
Annapolis, Md.....	\$25,005.96	22,664	\$1.1083	\$0.5299
Canacao, P. I.....	54,327.21	43,457	1.25	.499
Chelsea, Mass.....	54,169.83	54,450	.9948	.583
Great Lakes, Ill.....	7,844.88	8,398	.8318	.396
Guam.....	24,899.37	14,066	1.758	.846
Las Animas, Colo.....	120,681.09	113,388	1.093	.7296
Mare Island, Cal.....	86,668.11	86,564	1.0014	.6215
Narragansett Bay, R. I.....	64,131.12	58,894	1.08	.514
New York, N. Y.....	98,019.92	90,605	1.0818	.4589
Norfolk, Va.....	115,212.87	136,692	.8428	.4305
Olongapo, P. I.....	32,451.77	29,965	1.082	.686
Philadelphia, Pa.....	68,313.87	65,388	.96827	.586
Port Royal, S. C.....	10,724.07	8,616	1.244	.443
Portsmouth, N. H.....	33,364.41	17,771	1.877	.543
Puget Sound, Wash.....	40,732.80	32,654	1.2473	.5433
Washington, D. C.....	60,625.63	49,326	1.147	.607
Yokohama, Japan.....	5,111.02	3,062	1.668	.493

TABLE No. 4.—Statement of the activities of naval medical supply depots.

Supply Depot.	Number of requisitions.	Value of requisitions filled.
New York, N. Y.....	974	\$251,148.06
Mare Island, Cal.....	265	59,528.72
Annapolis, Md.....	161	15,915.99

TABLE No. 5.—Statement of the naval hospital fund.

The condition of the fund is as follows:

Balance on hand July 1, 1913.....	\$3,780.17
Transferred to credit since July 1, 1913.....	983,791.99
Total.....	992,572.16
Expended since July 1, 1913.....	992,508.88
Balance on hand June 30, 1914.....	63.28

REPORT OF THE MAJOR GENERAL COMMANDANT OF THE UNITED STATES MARINE CORPS.

HEADQUARTERS UNITED STATES MARINE CORPS,
Washington, October 2, 1914.

From: The Major General Commandant.

To: The Secretary of the Navy.

Subject: Annual report of the condition and service of the United States Marine Corps for the fiscal year ending June 30, 1914.

Reference: (a) Official memorandum, Secretary of the Navy, August 3, 1914.

1. In compliance with the department's instructions contained in reference (a), the following report of the condition and service of the United States Marine Corps for the fiscal year ending June 30, 1914, is submitted.

2. During the period covered by this report officers of the adjutant and inspector's department have made the usual inspections, and the reports in connection therewith have shown satisfactory conditions as to the health, discipline, and efficiency of the corps. In this connection, however, the undersigned desires to state that in his opinion the long-continued service in the tropics occasioned by the frequent expeditions that have been sent out is bound to have an unfortunate effect on the health of the Marine Corps. At some of the posts the lack of adequate and sanitary barracks has caused adverse reports to be made, and the necessity for buildings to be used as drill halls and gymnasiums and for facilities to provide legitimate amusements within the garrisons for the enlisted men thereof has been the subject of numerous reports. These conditions are being improved so far as practicable from year to year, but the amount that can be used, with the regular appropriations, is of necessity limited. When such buildings are provided the tendency is for the men to remain within the limits of the garrison, but where the men are required to go into the near-by towns and cities for their amusements the result is usually unfortunate and causes over-indulgences of various kinds, frequently culminating in trials by court-martial or in desertion. In this connection the undersigned wishes to state that he considers it essential to the efficiency of the Marine Corps and for the information of headquarters that at least yearly inspections of all posts by officers of the adjutant and inspector's department be made. Such inspections not only bring to light but also remedy irregularities, cause commanding officers and organization commanders to use greater effort to bring their commands to a state of proficiency, and at the same time enable the commandant of the corps to take the requisite steps to bring the corps to a higher state of efficiency. Owing to the absence of a large part of the Marine Corps on expeditionary service, the undersigned has made no personal inspections, but upon the return of the

brigade now in Mexico to the United States it is deemed essential that he should inform himself, by personal inspection, of the needs of the various posts and organizations of the corps.

INCREASE IN CORPS.

3. In view of the varied and important character of the work performed during the past year by the Marine Corps in the way of expeditionary work, and especially that pertaining to Mexico, it has been necessary to practically deplete the barracks in this country, and it has also been almost impossible to keep the complements of ships up to the quota which has been established by the department. The requirements of the past year have fully and clearly demonstrated the absolute necessity for a very definite increase in both officers and enlisted men of the corps, not only properly to do the work which it is called upon to do, but also to maintain the high standard which the corps has previously attained and which the department requires it to maintain. The increases which are requested and which are tabulated herein are not based on imaginary or hypothetical contingencies or any desire to stimulate promotion or to create easier duty, but these increases are requested simply and solely because of the absolute necessity for them. The corps can not much longer remain efficient under the strain to which officers and men are now almost continuously subjected both at home and abroad, and it is feared that a continuance of the character of work which has been performed during the past year will result in physical degeneration, and such a condition is bound to result in decreased efficiency.

4. I have directed that the following increases in officers and men be incorporated in the estimates for the coming fiscal year:

Brigadier generals.....	2
Colonel.....	1
Lieutenant colonel.....	1
Majors.....	2
Captains.....	11
Captain, assistant quartermaster.....	1
Captain, assistant paymaster.....	1
First lieutenants.....	11
Second lieutenants.....	11
Paymaster's clerk.....	1
Sergeants major.....	3
Quartermaster sergeants.....	8
Quartermaster sergeants (pay department).....	10
First sergeants.....	9
Gunnery sergeants.....	16
Sergeants.....	62
Corporals.....	84
Drummers.....	4
Trumpeters.....	4
Privates.....	579
<hr/>	
Total:	
Officers.....	41
Clerk.....	1
Men.....	779
	<hr/>
	821

In addition to the foregoing, attention is invited to the fact that the department has frequently decided that the Marine Corps enlisted

personnel should be one-fifth of that of the Navy, and that on such a basis the Marine Corps is at present 379 men short of this quota. In addition to the number required to keep up our quota I have asked for 400 men, not only because I understand from an authoritative source that it is the intention of the department to request the Congress to increase the enlisted personnel of the Navy by the moderate number of 2,000 men but also because I believe that these 400 men are absolutely necessary to provide the corps with a sufficient number of men to relieve the heavy strain to which they are now subjected and to maintain the force at the high standard of efficiency which I consider necessary.

5. The officers mentioned in the above list and their grades are not in excess of, but as a matter of fact are below, the quota necessary to provide a proper number of officers for the contemplated enlisted strength of the Marine Corps. It can be shown by statistics that even if not a single enlisted man be added to the corps the number of officers herein asked for would, if allowed, not only furnish no more officers than are necessary to properly officer the present enlisted strength but would still be below the quota which has been allotted to the same number of men in the Army.

6. Particular attention is invited to the recommendation that the grade of brigadier general be created for the Marine Corps. Not only is the Marine Corps a division commanded by a major general, and as such entitled to brigadier generals, but, furthermore, the duty to which the corps has in recent years been assigned has clearly demonstrated the necessity for officers of this rank in order that officers of proper rank may be assigned to the duty of commanding brigades. In recent years several brigades of from 2,000 to 4,000 men have been organized and sent out of the country, and recently there has been a brigade of over 3,000 men serving in Mexico in the field with the Army. All of the brigades which have been organized have been commanded by colonels, while the officers commanding the regiments of said brigades have also had similar rank. It must be apparent that such a condition of affairs is not only unmilitary but also does not tend to the greatest efficiency, for such an officer in command of the brigade is bound to be dissatisfied when he is ordered to command a unit larger than that to which his rank entitles him because of the fact that he has increased responsibility and yet does not receive any of the emoluments which go with such a command; and at the same time the officers who command the regiments must feel dissatisfied in having as their commanding officer an officer of similar rank and in many cases their senior only by a few numbers. It is due to the strong esprit de corps that the efficiency of the corps has not suffered, but that consideration should not stand in the way of the corps getting the recognition to which its numbers and the duty to which it is assigned entitle it.

APPOINTMENT OF MARINE OFFICERS.

7. I can not too earnestly recommend that all vacancies which may now exist or may hereafter be created in the commissioned personnel of the Marine Corps be filled from graduates of the Naval Academy or from worthy noncommissioned officers of the Marine Corps. I unhesitatingly express the opinion that the best interests of the service would be served if the officers of the Marine Corps were

appointed from graduates of the Naval Academy, for not only would the corps then receive officers who are better educated technically than those now admitted but also much better qualified physically, as the four years at the Academy result in the survival of the fittest. Recently there have been altogether too many young officers of the corps who, soon after their entry, have developed physical defects which render them unfit for the service. This in my opinion would not have occurred had graduates of the Naval Academy been selected. If the Naval Academy is, as we believe it to be, the best institution of the kind for the training of officers, I think there can be no doubt but that it should supply the commissioned personnel of the Navy and Marine Corps so far as it is possible to do so.

8. If it should be decided to so appoint graduates of the Naval Academy to the Marine Corps I think it would be advisable to so change the curriculum at the end of the second or third year of the academic course that certain midshipmen would be designated for probable appointment to the Marine Corps, and that during the remainder of their course they be required to specialize along lines which would better prepare them for their duty in the Marine Corps. It is further believed that if the staff corps of the Navy are hereafter filled as far as possible from graduates of the Naval Academy, in order to secure contentment the same laws which may be enacted as to selection, promotion, etc., with regard to such staff appointments should also be made applicable to the Marine Corps.

9. If, however, appointments to the Marine Corps be not made from graduates of the Naval Academy as above advised and the vacancies now existing be filled from civil life or from the ranks, it is advised that no appointments be made until Congress has been asked to enact legislation providing for the grade of provisional or acting second lieutenant, to serve as such for two years, during which time it is necessary for them to attend the preparatory school for officers of the Marine Corps. On their successful completion of the course they should be commissioned according to their standing at the school, or, in case their work has not been satisfactory, their service should be terminated.

SEA PAY FOR OFFICERS AND MEN.

10. Owing to the peculiar status as to service of the Marine Corps, and to that alone, I ascribe the unfortunate situation as to pay in which the Marine Corps is placed. Congress, after mature deliberation and for reasons appearing to it to be fair, reasonable, and just, has provided certain increases in pay for officers and men of both the Army and the Navy under orders which render increased expenses obligatory, as, for instance, by the act of May 13, 1908 (35 Stat. L., 128), provision is made for an increase of 10 per cent in the pay of officers and men of the Navy serving on board vessels, and under the act of June 30, 1902 (32 Stat. L., 512), and by the act of May 11, 1910 (35 Stat. L., 110), provision is also made for increases of 10 per cent in the pay of officers and men of the Army serving beyond the limits of the States comprising the Union.

11. The peculiar status of the Marine Corps as a part of the naval service, and yet not a part of the Navy, was evidently overlooked in the act of May 13, 1908, referring to the Navy, and as a result officers and men of the Marine Corps serving on board vessels of the Navy

who are subjected to all of the inconveniences and extra expenses to which officers and men of the Navy are subjected are nevertheless the only persons so serving who do not receive the extra compensation now authorized by the act of May 13, 1908. There can be no question that from both an equitable and a legal standpoint the officers and enlisted men of the Marine Corps serving on board ship should receive the extra compensation, and the department's favorable action thereon is desired, for I have no doubt that the Congress will see the justice of this claim and grant the increase requested, especially as a very small increase of appropriation is necessary, and because if granted the pay of the enlisted men of the Marine Corps at sea would still be from 10 to 15 per cent less than that of enlisted men of the Navy of similar grade.

NEW RATINGS AND PAY THEREOF.

12. Due to the activities of the last few years in work connected with advance base preparedness, the character of the work performed by the Marine Corps has very materially changed. In many particulars entirely novel conditions have confronted the corps, and while they have been most successfully met it has been accomplished by almost superhuman efforts on the part of the officers and enlisted men of the corps. It was no small problem for the officers and men to become trained in the multifarious technical duties which devolved upon the various elements of the fixed defense regiment of the advance base brigade. Highly technical knowledge, such as is possessed by specially trained enlisted men of the Army in the Artillery, Engineer, and Signal Corps, was absolutely necessary to successfully carry on this new work assigned to the Marine Corps. A large number of men have been educated and to-day are qualified to perform these highly technical duties, and this has been accomplished by extra study and work on their part, and yet they are receiving the same pay allowed enlisted men of the Marine Corps who are not doing this highly technical work. This condition is due to the fact that until recently the work to which the Marine Corps was assigned developed no real necessity for trained men in the special technical duties above referred to, and consequently there was no need of asking for legislation to establish special ratings for the men doing such work. As the men of the corps are now actually filling the positions and doing the technical work at a very materially reduced rate of pay from that received by enlisted men of the Army who serve in the Artillery, Engineer, and Signal Corps, and who are doing the same class of work, it is not difficult to conceive that the enlisted men of the corps feel that they are being discriminated against and that they are entitled to the same compensation as is given to men performing similar duty in the Army.

13. It is also not difficult to see that unless legislation is enacted by which enlisted men of the Marine Corps receive similar pay to that received by men in the Army performing the same character of work dissatisfaction will result, and, furthermore, upon the expiration of their present enlistments these men, who have been trained in this work by the Marine Corps, will fail to reenlist in the corps, but will enlist in the Army, where a higher rate of pay awaits them for performing this same duty.

14. I trust that both the law and the equity of the case will appeal to the department, and that it will look favorably upon my recom-

mendation, as embodied in the estimates, to the effect that enlisted men of the Marine Corps who perform special technical work should be placed upon the same pay basis as are men who perform similar work in the Army.

FIELD CLERKS.

15. The undersigned desires to renew the recommendation made in previous reports that the status of field clerks of the Quartermaster's Department be changed by the Congress, so as to place them on the same footing as to pay and allowances as paymasters' clerks of the Navy and clerks of the assistant paymasters of the Marine Corps. At present these clerks receive \$1,400 per annum and are stationed where their services can best be utilized for the efficiency of their department. Although civilians, they accompany expeditionary forces. For their own protection in time of war, and in order that they be under control of superior authority, it is considered that they should be given a military status and an appropriate uniform. Experience during the past year has demonstrated that the number authorized by law—four—is too small, and that a total of eight are required to perform the duties that should properly be assigned to them.

ENLISTED FORCE.

16. Gains and losses in the enlisted force during the year have been as follows:

Enlisted.....	2,701
Reenlisted from Marine Corps.....	854
Reenlisted from Army.....	327
Reenlisted from Navy.....	7
Joined from desertion.....	400
Prisoners restored.....	301
Total gain.....	4,590
Discharged.....	3,052
Died.....	46
Deserted (gross).....	1,091
Retired.....	15
Prisoners sentenced to dishonorable discharge.....	273
Total loss.....	4,477
Net gain.....	113

DISTRIBUTION OF FORCE.

17. Summary of distribution of officers and enlisted men June 30, 1914:

	Officers.	Enlisted men.
On shore duty:		
In the United States.....	1 105	2,493
Outside United States.....	184	5,460
On board ship:		
Receiving ships.....	1	154
Cruising vessels.....	51	1,791
Total in service.....	341	9,898
Allowed by law.....	346	9,921
Shortage.....	5	33

¹ Includes 20 second lieutenants under instruction at the marine officers' school.

18. During the period in question the marine brigade in the Philippines has been disbanded, the battalion has been withdrawn from Panama, and the strength of the commands at Honolulu and Peking has been reduced, while the strength of the command at Guam has been increased.

APPOINTMENTS, RETIREMENTS, RESIGNATIONS, DEATHS, ETC.

19. On February 25, 1914, the undersigned was appointed major general commandant, vice Maj. Gen. William P. Biddle, retired upon his own application. In addition to the above there has been 1 appointment of a first lieutenant to the grade of captain assistant quartermaster, 20 appointments to the grade of second lieutenant, 2 retirements, 1 resignation, 2 dismissals, 1 honorable discharge, 2 deaths on the active list, and 4 deaths on the retired list.

CAMPAIGN BADGES, GOOD-CONDUCT MEDALS, ETC.

20. Since the last report the following campaign badges and bars have been issued to officers and enlisted men of the Marine Corps:

Twenty-one Civil War campaign badges, 16 Spanish campaign badges, 2 West Indies campaign badges, 10 China campaign badges, 13 Army of Cuban Pacification badges.

21. During the past year 614 good-conduct medals and 231 good-conduct medal bars have been issued to enlisted men of the Marine Corps.

22.

RECRUITING.

	Fiscal year ending June 30—	
	1913	1914
Total number enlisted.....	4,042	3,889
Decrease in enlistment of 3.7 per cent.		
Net desertions.....	913	856
Percentage of desertions to total borne on rolls.....	6.1	6
Decrease in percentage of desertions of 0.1 per cent.		
Apprehended and surrendered from desertion.....	262	400
Increase in apprehensions, etc., of 52.6 per cent.		
Dis honorable discharge, sentence general court-martial.....	177	185
Reenlisted from Marine Corps.....	723	854
Percentage reenlisting from Marine Corps.....	17.9	21.9
Total reenlistments (including those from Army).....	1,044	1,181
Percentage of reenlistments to total enlistments.....	25.8	30
Discharges by medical survey within 3 months from date of enlistment.....	21	20
Decrease in medical surveys of 5 per cent.		
Cost per recruit, including transportation.....	\$59.07	\$47.40
Cost per recruit, excluding transportation.....	\$38.07	\$28.57

23. During the past year the number of enlisted men employed in the recruiting service has been reduced from 203 to 120 and the number of recruiting stations from 126 to 101, effecting a saving in the items board and lodging and rentals of approximately \$4,300 per month. The cost per recruit has been reduced by approximately \$10.

24. In addition to keeping the Marine Corps enlisted to its legal authorized strength 625 men were enlisted for the Navy.

25. The reorganization of the recruiting service into three recruiting districts has resulted most favorably. During the past year this

office, in cooperation with the Bureau of Medicine and Surgery and the medical examiners appointed by the Marine Corps, has continued collecting data in regard to the desirability of instituting some system of detecting the mentally unsound. While sufficient data have not as yet been collected to warrant the extension to the service at large of any system of examination to detect mental deficiency, yet the fact that men who are mentally deficient are usually attracted to military life and after entering the service are not amenable to discipline renders it of great importance to the service that some system of preventing the enlistment of men of this type be devised and adopted.

RECRUIT DEPOTS.

26. The recruit depots have now been in operation since November, 1911. The systematic instruction given to recruits has largely increased the efficiency of the personnel and eliminated in the early stages a large percentage of undesirables.

27. During the past year the course of instruction at the recruit depots at Norfolk and Mare Island has been carried out in accordance with the prescribed schedule, except that when expeditions have been organized it was necessary to include all recruits who had completed six weeks' service. Unfortunate as it is with the present number of men, whenever an emergency arises a reduction in the course can not be avoided. The regular course of instruction lasts 14 weeks, and all of this time is necessary to so train the recruit that he may be able to perform his duties in a fairly proficient manner upon leaving the depot. Since May 1, the course has been rearranged so that by the end of six weeks' service the recruit will have had the Army marksman's course in rifle firing and one week in camp for field maneuvers. This necessitates sending men to the range four weeks earlier than prescribed by the regular schedule and has resulted in a considerably smaller number of qualifications. This is unfortunate, as statistics show that the percentage of desertions among unqualified men is approximately three times as great as it is among men who have qualified as marksmen or higher. When the present emergency has ceased the regular schedule will be resumed.

28. During the fiscal year recruits have been under instruction as follows:

Norfolk.....	1,850
Mare Island.....	750

29. The closing of the recruit depot at Philadelphia and the concentration of all recruits on the Atlantic coast for training in the one depot at Norfolk has resulted in increased efficiency, but the desired results can not be obtained so long as the depot is hampered by the lack of proper equipment and accommodations.

30. The depot at Norfolk is situated on what is called the "Schmoele Tract," a part of the navy yard not now used for industrial purposes but which it is understood will be required in whole or in part in the future development of the yard or when an additional dry-dock is authorized at that station. The recruits are quartered in tents throughout the year, and while this is good training for service in the field, during the winter months it causes great discomfort among men who are not inured to hardships, with an attendant increase in the

number of desertions. There are no suitable buildings where indoor drills may be held in inclement weather, and the instruction has therefore been materially interfered with, particularly during the winter months, when the number of recruits is ordinarily at its maximum. Proper amusement rooms are not available and it has been extremely difficult to provide diversion for such a large number of men as must be assembled at a recruit depot. It has also been necessary for the recruits to be thrown more or less with the older men, and until their course of training is completed this is considered most undesirable, not only on account of the spread of contagious diseases to which recruits are extremely liable, but also on account of the training of the recruits. While a considerable number of buildings of a temporary nature have been erected from the current appropriations and the conditions materially improved during the past year, yet the depot at best is a makeshift and the desired results can not be obtained until proper and adequate buildings are provided.

PHYSICAL TRAINING.

31. The Swedish system of physical training, which has been adopted for the naval service, has been used throughout the year. One officer with an experienced assistant has been engaged during this period in giving instructions in this system at the stations on the Pacific coast and at Honolulu and Guam. The use of the dynamometer to detect physical weaknesses in applicants for enlistment is now being tried out at the recruit depot at Norfolk, but the tests have not been in operation for a sufficient length of time to determine their value.

TARGET PRACTICE.

32. *Qualifications.*—The number of men in the Marine Corps who have qualified as marksmen or better has steadily increased, as shown by the following tables:

	October.				June 30, 1914.
	1910	1911	1912	1913	
Expert riflemen.....	309	435	446	663	596
Sharpshooters.....	878	1,665	2,067	2,863	2,749
Marksmen.....	723	784	634	811	757
All grades.....	1,910	2,884	3,147	4,307	4,102
Per cent of total enlisted strength qualified in the various grades.....	0.209	0.318	0.335	0.434	0.415

The apparent decrease from October, 1913, to June 30, 1914, is due to the fact that during the entire present target season a large percentage of the enlisted strength of the corps has been on expeditionary duty and consequently has been afforded no opportunity to engage in target practice.

33. *Ranges.*—The same situation exists as in former years regarding ranges. The Army authorities, upon request, have courteously placed the Fort Barry range at the disposal of the Marine Corps. The use of this range was also granted by the Army during the month

of October, 1913. Owing to the absence of the major portion of marines ordinarily attached to posts in the United States on expeditionary duty, the accommodations at the Marine Corps rifle range at Winthrop, Md., have proven ample for the needs of the corps during the present target season. In connection with the proposed abandonment of the rifle range at Winthrop it is recommended that this range be not abandoned until a new range has been purchased or a range already in existence has been secured for use by the Marine Corps.

34. *Competitions.*—The Atlantic Division and the Marine Corps competitions were successfully held at Winthrop, Md., on October 16–17, 1913. The former was won by Pvt. Carl H. Sampson with an excellent score of 899, while the latter was won by Sergt. Eugene L. Mullahy with a score of 894. The usual medals were awarded, one officer being awarded a bronze medal in the Atlantic Division competition for his standing. The course prescribed for departmental competitions in the Army was fired in both cases.

35. The Philippines Division competition was held on the range at Maquinaya, P. I., on January 13–14, 1914. This match was won by Corpl. Elmer E. Greenlaw with a score of 855. The usual medals were awarded, two officers being awarded silver medals for their standing. The course for departmental competitions in the Army was fired.

36. On October 16, 1913, the Elliott trophy was competed for by teams representing the various marine barracks on the Atlantic coast. This trophy was won by the team representing Winthrop with a creditable score of 2,732.

37. On September 29, 1914, the Bay State trophy was competed for by teams representing the naval prisons at Portsmouth, N. H., and Boston, Mass., and the marine barracks at Portsmouth, N. H., Boston, Mass., and New York, N. Y. The team representing the last-named post won the trophy with a score of 2,615.

38. *Rifle-team squad.*—A rifle-team squad was assembled at Winthrop, Md. This squad, consisting of approximately 20 men under command of First Lieut. Calvin B. Matthews, proceeded on August 21, 1914, to Sea Girt, N. J., to take part in the matches of the New York State Rifle Association, the New Jersey State Rifle Association, and the national divisional individual and team matches.

39. The work of the squad was most creditable in all the matches at Sea Girt. A team from the squad won first place in the following matches:

The Dryden match.

The New Jersey State two-men team match.

The team also won second place in the national divisional team match.

The following individual events were won by members of the squad:

The Hayes match (Sergt. Ollie M. Schriver).

The Palma individual match (Corpl. Noah G. Reeves).

The Roe match (Corpl. James F. Coppedge).

The Spencer match (Corpl. James F. Coppedge).

The Sea Girt championship (Corpl. James F. Coppedge).

The national divisional individual match (Pvt. Charles C. Terry).

40. *Miscellaneous.*—The open championship for North China was held at Tientsin, China, on April 13, 1914. This rifle match was won

for the fourth consecutive year by the marines. First Sergt. Fredrick Wahlstrom won the match, and Sergt. James J. O'Neil took second place.

SERVICE AFLOAT.

41. With the exception of the marine detachments for the *Texas* and *New York*, which were assembled for preliminary training at the marine barracks, Annapolis, Md., the policy of having men sent to that station for training preliminary to service with the Atlantic fleet has not been carried out, owing to the absence of all available men on advance base work or on expeditionary duty in Mexican waters.

42. Except on the Asiatic station, marine detachments have been withdrawn from the smaller ships, and in this connection attention is invited to the fact that these ships are usually stationed in those parts of the world where local troubles are most apt to occur, and where a marine detachment under an officer available for immediate landing might be most desirable. In view of this it is suggested for the consideration of the department that it might be well to adopt the policy of utilizing some of the medium-sized ships as well as light-draft gunboats for this duty and of placing on board large marine detachments, varying in size from a company to a small battalion, supplementing such organizations by the regular complement of the engineer force and by a sufficient number of the other naval branches, to care for the ships in case it became necessary to land the marine detachment. It is suggested for the consideration of the department that if a sufficient number of marines had been available to enable this policy to have been carried out during the last year, it would have relieved a considerable number of battleships from this duty and would have enabled them to have carried on their training preparatory to war in a more satisfactory manner. It is believed that the officers and men of the Marine Corps can be trained to carry on most of the duties of the ship, and to this end the recommendation submitted last year is renewed, that junior marine officers serving afloat be assigned duty as watch officers, in addition to their duties in connection with the detachments.

43. It is of the utmost advantage to the naval service to have at its disposal a corps of officers and men who are trained equally well for service on board ships of the Navy or on shore in landing operations. In order that as many as possible of the officers and men of the Marine Corps be kept in close touch with the naval service and with service on board ship it is intended to reduce the tour of duty afloat for the Marine Corps to 2 years for officers and to not less than 18 months nor more than 2 years for men, a small proportion only of the men to be relieved at any one time, so that the greater part of the detachments afloat will always be composed of well-trained men who are thoroughly familiar with the ships to which attached.

44. Attention is also invited to the fact that it has been impossible to provide marine detachments for ships of the Atlantic and of the Pacific reserve fleets, and as these ships are kept in reserve to enable them to be placed in full commission at short notice the lack of officers and men for such detachments is a serious disadvantage to the Marine Corps.

ADVANCE BASE.

45. In addition to its ordinary and usual duties and certain expeditionary work the Marine Corps has during the past year been employed on at least two very important duties—the advance base work at Culebra and the landing at and the assisting in the seizure of Vera Cruz. Owing to the novel character of the work connected with the advance base, as well as its important and far-reaching effect upon the entire naval service, it is considered well worthy of special comment.

46. The officers and men engaged in this work during the last winter were for a comparatively short time stationed at the navy yard, Philadelphia, Pa., where at first they were instructed so as to educate both officers and enlisted men in the theory of their new duties, and subsequently elaborate practical exercises were held, both in the navy yard and on the Delaware River, in all of the various duties which were to be performed by the fixed defense regiment.

47. In January, 1914, a brigade commanded by Col. George Barnett, United States Marine Corps, and consisting of two regiments of about 59 officers and 1,700 enlisted men, was dispatched on the *Hancock* and the *Prairie*, with directions to establish an advance base on the Island of Culebra, Porto Rico. The program of the maneuvers, as outlined by the commander in chief of the Atlantic Fleet, had for its purpose the demonstration of the ability of the officers and men of the corps to put into practice what had been taught them at the Advance Base School. An examination of the report made by the commander in chief shows that the program of exercises was extended in character and the work of great value to officers and men. Taking into consideration the fact that this was the first expedition of this character conducted by the Navy and Marine Corps, the work done was of a most satisfactory nature, and on its completion called forth very strong commendation from the commander in chief of the fleet in a report to the department, to which I take much pleasure in inviting especial attention.

48. I believe that advance base work is the most important duty for which marines can be trained, not only because of the possible necessity which may arise for actually seizing and holding an advance base, but also because the training obtained in preparing for this duty is of inestimable value to the corps in the ordinary expeditionary duty which it is so often called upon to perform. In fact it has been learned that to the character of the training resulting from advance base work there is due much of the successful work which the Marine Corps brigade now serving in Vera Cruz has performed.

49. The maneuvers in Culebra last winter demonstrated beyond peradventure that in order to do successful work of this character a yearly appropriation is necessary in order that the proper material may be procured, and, after being procured, to keep it up to date and in proper condition. A modest appropriation only will be necessary for this purpose, and, when made, should be expended under the direction of the Secretary of the Navy on the joint recommendation of the chief of the Bureau of Ordnance and the major general commandant of the Marine Corps.

50. In connection with this reference to advance base it may be proper to state that an impression seems to prevail that advance base work is purely a Marine Corps matter. This is an error, as there can be no doubt but that advance base work is essentially a naval matter in which the entire service is most deeply interested, and while the execution of the work is placed in the hands of the Marine Corps it is nevertheless necessary for successful results that it be given earnest cooperation by and coordination with the various branches of the naval service. It is hoped that every facility will be provided the corps for the continuing of this work, and if so, steps should be taken not only to perfect the outfit but also to devote as much time as possible to the training of the men in this work.

TRANSPORTS.

51. The General Board has recommended that a brigade organization be maintained in the Marine Corps; that next spring there be even more extensive advance base work than that of last year; and that a brigade of at least 2,500 men with all the necessary guns, mines, and equipment be sent to the West Indies. At the present time there are available but two transports, the *Prairie* and the *Hancock*, and these, even when crowded would be unable to carry the number of men above mentioned. It will be found necessary to send a large number of men as passengers on battleships, and this should be avoided, for it is not only detrimental to the interior economy of the battleship but it is also coupled with severe discomfort and inconvenience for the men. It is a matter of record that the Marine Corps has in past years on expeditionary duty undergone privations to which it ought not to be subjected if it can possibly be avoided. Whilst prior conditions have been somewhat alleviated by placing the *Hancock* in commission, yet this has not marked a sufficient improvement. When the transport appropriated for by Congress which is now in course of construction is completed a relief will be granted if the present transports are still available, but it is deemed proper, however, to invite attention to the fact that both the *Prairie* and the *Hancock* are fast nearing the end, and it is therefore deemed proper in view of the fact that it takes some time to design and build a transport, to most urgently recommend that the Congress be asked to provide for an additional transport similar to the one now being constructed.

EXPEDITIONS.

52. Whilst during the past year the number of times the Marine Corps has been ordered to perform expeditionary duty has not been as many as in previous years, yet the scope of work performed by it has been much larger.

53. In January, 1914, 1 officer and 56 men, comprising the marine detachment of the U. S. S. *South Carolina*, were landed at Port au Prince, Hayti, for the protection of the American legation and American interests.

54. A regiment consisting of 30 officers and 845 enlisted men, which was subsequently known as the Second Regiment of the Advance Base Brigade, sailed on the *Prairie*, from Philadelphia Novem-

ber 27, 1913, for Pensacola, Fla., where it went into barracks. They were reembarked on the *Prairie* January 3, 1914, and sailed for Culebra, Porto Rico, and took part in the advance base work there. This regiment returned to Pensacola February 15, 1914, when 14 officers and 329 men were reembarked on the *Prairie* for Vera Cruz. Sixteen officers and 516 men embarked on the *Mississippi* for Vera Cruz on April 21, 1914.

55. A regiment consisting of 24 officers and 810 enlisted men, subsequently known as the First Regiment of the Advance Base Brigade, sailed from Philadelphia on the *Hancock* on January 3, 1914, for Culebra. On the completion of the maneuvers it sailed to Pensacola, Fla., thence to New Orleans, Tampico, and arrived at Vera Cruz, Mexico, April 22, 1914.

56. The Third Regiment, consisting of 33 officers and 861 enlisted men, embarked on the *Morro Castle* at Philadelphia April 23, 1914, and proceeded direct to Vera Cruz, where it arrived on April 30, 1914.

57. The Fourth Regiment was assembled at Bremerton, Wash., and at Mare Island, Cal., embarking on the *South Dakota*, the *West Virginia*, and the *Jupiter* on April 18, 24, and 22, respectively. Of this regiment there were about 24 officers and 900 enlisted men on the *South Dakota* and *Jupiter* and 4 officers and 200 enlisted men on the *West Virginia*. This regiment remained on these vessels on the west coast of Mexico until July 3, 1914, when it went into camp at North Island, San Diego, Cal., where it now is.

58. The above expeditionary work required a large number of men, and as a result the barracks in this country have been practically depleted and the men who have been left have been compelled to perform the most arduous duty. The above expeditionary work shows conclusively the absolute necessity for an increase of officers and men of the corps.

59. Subsequent to the end of the fiscal year and prior to the submitting of this report an additional regiment, the fifth, consisting of 27 officers and 702 enlisted men, was organized under command of Col. Charles A. Doyen for duty in Santo Domingan waters.

VERA CRUZ.

60. When conditions in Mexico became grave, and action on the part of our Government was contemplated, arrangements were made by these headquarters for the mobilization of as many officers and men of the corps as it was possible to detail. The Second Regiment, consisting of 14 officers and 329 men, was embarked on the *Prairie* at Pensacola March 5, and arrived at Vera Cruz on March 9; of said regiment 16 officers and 516 men remained at Pensacola until April 21, when they were embarked on the *Mississippi*, and arrived at Vera Cruz on April 24. The First Regiment, consisting of 24 officers and 810 men, left New Orleans for Tampico on the *Hancock* April 15, 1914, and remained there until they were landed at Vera Cruz on April 22, 1914. The Third Regiment, consisting of 33 officers and 861 enlisted men, was assembled at Philadelphia and embarked on the *Morro Castle*, a chartered vessel, sailing April 23, 1914, and landing at Vera Cruz April 30, 1914. In addition to the foregoing regiments, which were mobilized from those serving ashore in this country, a

battalion consisting of 20 officers and 632 enlisted men was assembled from the ships of the North Atlantic Fleet and landed at Vera Cruz on April 21, 1914. From the 21st day of April until the present time the marines have been ashore at Vera Cruz, at first serving under the Navy and latterly under the Army.

61. I deem it my duty, and at the same time a great pleasure, to bring to the department's attention the high character of work performed by the marines in Mexico. The satisfactory work which has been done is not only shown by the official reports which have reached these headquarters, but also from information which shows it to be practically the unanimous opinion of the officers of the Army and the Navy who were present in Mexico that the marines had lived up to their high standard of efficiency. Attention is invited to the report of Rear Admiral F. F. Fletcher, United States Navy, on this subject, and also to the number of letters of commendation addressed by the department to officers and men of the corps for their distinguished services in Mexico.

AVIATION

62. Two officers and 6 men are now on aviation duty in connection with the Navy aeronautic section, and as soon as additional officers and men are available they will be detailed to this duty in accordance with the policy of the department.

MARINE OFFICERS' SCHOOL.

63. The regular course of instruction at the marine officers' school, Norfolk, has been somewhat interfered with owing to the necessity of assigning officers under instruction to duty with the First Brigade. The temporary quarters provided for the student officers at Norfolk are not at all appropriate for the use to which put, and the lack of drill hall, gymnasium facilities, and proper class and lecture rooms is a serious handicap to the efficiency of the school.

64. The policy of sending the student officers to camp for a period of approximately six weeks for practical exercises in military topography, field engineering, and minor tactics has been of great advantage and without question increased the efficiency of all officers completing the course.

INSTRUCTION OF OFFICERS AT SERVICE SCHOOLS.

65. Through the courtesy of the War Department, during the past fiscal year two officers have been under instruction at the Army War College, one at the Army Staff College, and one at the Army School of the Line. Owing to the organization of expeditionary forces it became necessary to relieve all but one of these officers a short time prior to the completion of their respective courses, and on account of the absence of a large proportion of officers on special duty it has been impossible to detail more than one officer for such instruction this year.

66. It is deeply regretted that the exigencies of the service have prevented the detail of an adequate number of officers to duty at the Naval War College.

MATERIAL.

67. The amount of the "Maintenance" appropriation provided by the Congress for the fiscal year ending June 30, 1914—\$3,000,000—was found inadequate owing to the mobilization and transfer of an exceptionally large number of men to expeditionary duty in Mexico, and it became necessary to obtain a deficiency appropriation of \$253,661.80 to provide for deficiencies under the subheads "Clothing," "Military stores," and "Contingent."

PUBLIC WORKS.

68. There were no appropriations made under the head of "Public works, Marine Corps," during the period covered by this report. More or less extensive improvements and additions at many of the stations of the corps are considered necessary for the proper instruction and handling of the enlisted personnel. The lack of proper drill halls, gymnasiums, and amusement and instruction rooms at practically all posts of the corps seriously interferes with the proper training of the men, and owing to the lack of adequate facilities for legitimate entertainment the men are led to go outside of the posts for their amusement.

BARRACKS, QUARTERS—NEW CONSTRUCTION.

69. The new construction program which has been requested in this year's estimates covers only a small part of that which is absolutely essential and does not contain many structures which are deemed necessary, not only because of efficiency and economy but also to protect the health of the men. At Mare Island and Norfolk, where the recruit depots are maintained, a large proportion of the command live in tents, well known to be the most expensive means of housing troops. Due to the limitation (\$200,000) for public works for the Marine Corps, it was impossible to include estimates for barracks at either of these yards. Out of the current appropriation it has been attempted to build at Mare Island small buildings in which to house some of the men, but at the best these are only make-shifts. It is not only desirable, but absolutely necessary, that suitable barracks for housing the men be built, especially at Mare Island, where the present barracks are old, dilapidated, unsightly, and have actually been condemned as unfit for occupancy. It requires but very little imagination to see the deleterious effects upon recruits who, arriving at their first station, find so little provided for their bodily comforts, as many of them are housed by the Government under much worse conditions than they had prior to their entering the service. I feel it my duty to lay these facts before the department as strongly and as earnestly as I can, and to plead for new buildings, not only because they are so necessary but also because the records show that the sums appropriated by the Congress for new construction have been insignificant, and when compared with those appropriated for the Army, on a pro rata basis, they are practically nil.

70. If the amount (\$200,000) which the Marine Corps was authorized to incorporate in the estimates for public works for the coming year be permitted to remain, I advise instead of dividing this amount into smaller amounts that the entire sum be designated for the build-

ing of a barracks either at Mare Island or Norfolk. It is hoped that, in addition to the above \$200,000, the \$400,000 which was appropriated by Congress for the construction of barracks and quarters on the Isthmus of Panama, and which requires no new estimate, will be requested to be reappropriated, and if so reappropriated that this entire sum be utilized for the building of a barracks at Mare Island. If my above recommendation meets with the department's approval and both sums are allowed the Marine Corps, it is further advised that the \$200,000 in the present estimates be devoted to barracks at Norfolk and the \$400,000 to barracks at Mare Island.

MARINE BARRACKS, BOSTON.

71. I bring to the department's special attention the fact that, even though the \$148,000 recently appropriated for marine barracks at Boston has been reappropriated for other purposes, the exigencies of the service demand my inviting attention to the urgent need for barracks and officers' quarters at Boston. Unless the post be abandoned something must be done, as the present barracks and quarters are almost uninhabitable and certainly unsightly and insanitary.

NEW ORLEANS.

72. Should the department decide to establish a regimental base at the naval station at New Orleans, I deem it proper to call attention to the fact that the only buildings suitable for housing men, and which will not be required for strictly navy-yard purposes, will need considerable overhauling and refitting before they will be at all suitable for occupancy as barracks. They will not only require a general overhauling and refitting but will require the introduction of toilet facilities, heat, light, etc., as well as kitchen and mess-hall facilities. There are only four sets of quarters which would be at all available for marine officers, and this would result in a large portion of the officers attached to the regiment being compelled to live outside the station and a remote distance therefrom, and this does not conduce to efficiency. If the post be established, provision should be made to quarter at the station all the officers attached to the regiment.

PHILADELPHIA DEPOT OF SUPPLIES.

73. During the past year the Marine Corps depot of supplies at Philadelphia has maintained its high standard of efficiency. Additional construction is urgently required and has been requested for this depot, and this meets with my approval, but the item was not directed to be included in the estimates, as the \$200,000 limitation prevented its being incorporated.

74. The results already obtained in the way of decreased cost of manufacture and increased quality of the output in every line makes me very sure that no better investment could be made by the Government than by increasing this plant so that it could furnish practically everything that is needed for the Marine Corps and a great deal that is needed for the Navy. The depot is now run to its full capacity and the annex is necessary to establish a plant requisite to the needs of the service.

PEARL HARBOR.

75. The officers' quarters, for which \$18,000 was appropriated in the act of March 4, 1913, are under construction, the contract date of completion being November 24, 1914. The department has suspended temporarily the erection of the post exchange and gymnasium and quartermaster's storehouse for which the Congress appropriated in the same act \$20,000 and \$25,000, respectively. In view of the isolation of this post it is considered most desirable that the above-mentioned buildings which have been appropriated for be completed. This is particularly desirable in view of the probability that this post will, in the near future, be increased to a strength of one battalion.

GUAM.

76. Owing to the increase in the size of the command at Guam a large proportion of the command, both officers and men, are living under canvas, in hired quarters, or in improvised barracks. In view of the isolation of this post and the consequent entire dependence of the officers and men upon themselves for their recreation, and also of the necessity that officers and men be properly housed, it is believed that as soon as the location of the naval station and the various barracks has been determined representations should be made looking toward the erection of adequate and suitable buildings for the command.

GEORGE BARNETT.

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